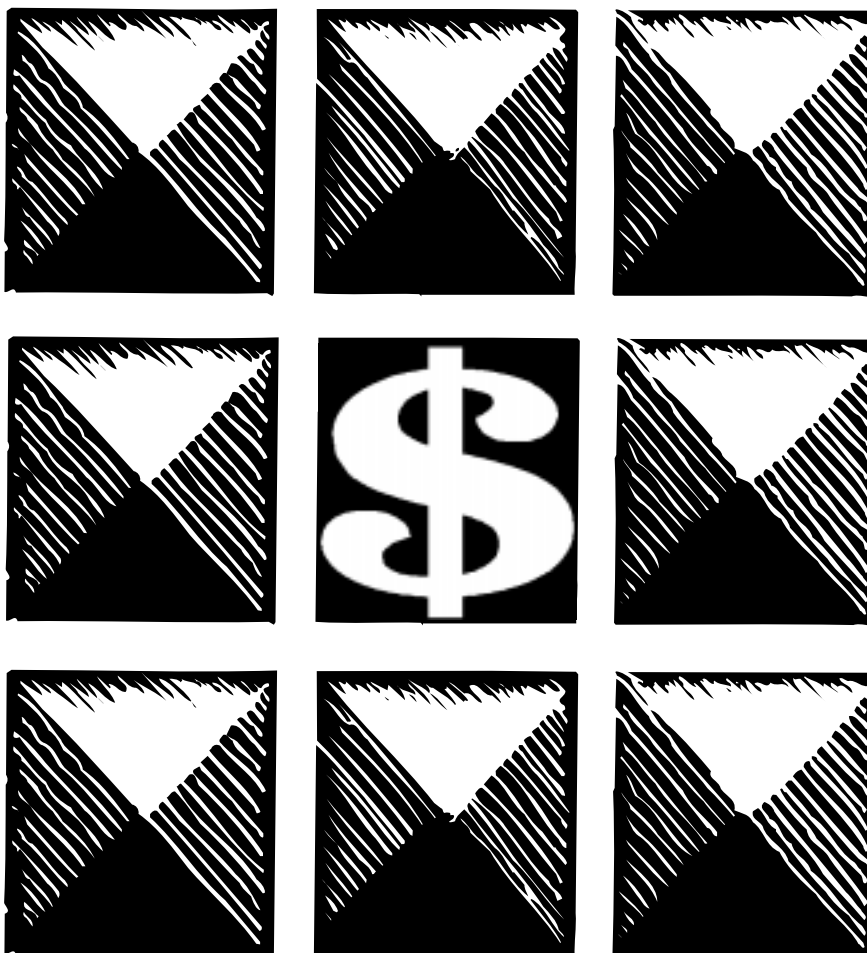


# Montana

## Informational Wage Rates by Occupation for 2000

*Includes Statewide, U.S. and  
Metropolitan Statistical Areas*



Published by  
Research and Analysis Bureau, Workforce Services Division  
Montana Department of Labor and Industry

The Montana State Workforce Services Division maintains 23 local Job Service Workforce Centers in principal cities of Montana. You are invited to call on any of these offices for assistance in filling positions in your organization, obtaining additional labor market information and for receiving other services in connection with your employment needs.

---

#### LOCAL JOB SERVICE WORKFORCE CENTER LISTING

ANACONDA  
307 East Park  
Anaconda, MT 59711  
(406-563-3444)

FLATHEAD  
427 1st Ave. E.  
P.O. Box 1879  
Kalispell, MT 59903-1879  
(406-758-6200)

HELENA  
715 Front St.  
P.O. Box 201505  
Helena, MT 59620-1505  
(406-447-3200)

POLSON  
417-B Main  
P.O. 970  
Polson, MT 59860  
(406-883-7880)

BILLINGS  
2121-B Rosebud Dr.  
Billings, MT 59102  
(406-652-3080)

GLASGOW  
74 4<sup>th</sup> St. N.  
Glasgow, MT 59230  
(406-228-9369)

LEWISTOWN  
300 1st Ave. N.  
Lewistown, MT 59457  
(406-538-8701)

SHELBY  
1125 Oilfield Ave.  
Shelby, MT 59474  
(406-434-5161)

BOZEMAN  
121 N. Willson  
Bozeman, MT 59715  
(406-582-9200)

GLENDAVE  
211 S. Kendrick  
Glendive, MT 59330  
(406-365-3314)

LIBBY  
417 Mineral Ave./Suite 4  
Libby, MT 59923  
(406-293-6282)

SIDNEY  
211 N. Central  
Sidney, MT 59270  
(406-482-1204)

BUTTE  
2201 White Blvd.  
Butte, MT 59702  
(406-494-0300)

GREAT FALLS  
1018 7th St. S.  
Great Falls, MT 59405  
(406-791-5800)

LIVINGSTON  
220 E. Park St.  
P.O. Box 1199  
Livingston, MT 59047  
(406-222-0520)

THOMPSON FALLS  
2 Tradewinds Way  
P.O. Box 669  
Thompson Falls, MT 59873  
(406-827-3472)

CUT BANK  
501 E. Main  
Cut Bank, MT 59427  
(406-873-2191)

HAMILTON  
333 W. Main St.  
Hamilton, MT 59840  
(406-363-1822)

MILES CITY  
12 N. 10th St.  
P.O. Box 1786  
Miles City, MT 59301  
(406-232-8340)

WOLF POINT  
201 Main St  
Wolf Point, MT 59201  
(406-653-1720)

DILLON  
730 N. Montana  
P.O. Box 1300  
Dillon, MT 59725  
(406-683-4259)

HAVRE  
160 1st Ave.  
Havre, MT 59501  
(406-265-5847)

MISSOULA  
539 S. 3rd St. W.  
P.O. Box 5027  
Missoula, MT 59806  
(406-728-7060)

#### LOCAL JOB SERVICE WORKFORCE CENTER WEBSITES

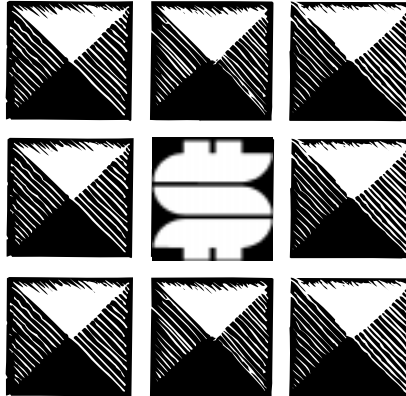
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# *Montana*

## *Informational Wage Rates*

### *by Occupation for 2000*



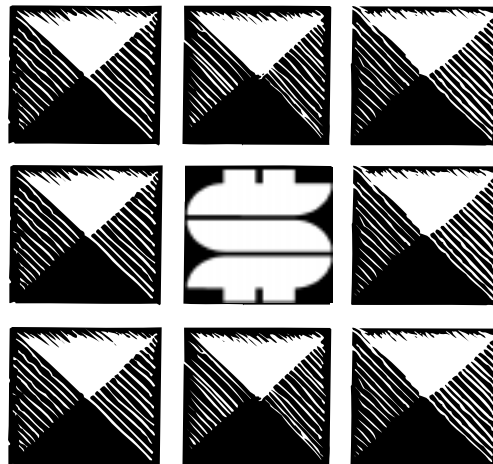
State of Montana  
Judy Martz, Governor  
Department of Labor & Industry  
Wendy Keating, Commissioner

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TDD 406-444-0532

**Also on the Internet at:**  
**<http://rad.dli.state.mt.us/>**

As always, the Research and Analysis Bureau welcomes questions, comments and suggestions from the public. In addition, we'll do our best to provide information in accessible format, on request, in compliance with the Americans with Disabilities Act.



**A sincere thank you is extended to: The many public and private organizations across Montana which took part in this survey; the Research and Analysis Bureau staff who helped with this project: Kitty Cutting, Dave Ducello, Casey Greenwood, Tina Hash, Roy Hinman, Julie Huntington, Kate Kahle, Pete Malin, Michelle McFarland, Bob Schleicher and Cathy Shenkle.**

**Bob Rafferty, Bureau Chief  
Research and Analysis Bureau  
Workforce Services Division  
Montana Department of Labor and Industry**

This publication contains wage rates for the U.S., Montana, Cascade, Missoula and Yellowstone County Metropolitan Statistical Areas (MSAs). A Metropolitan Statistical Area (MSA), as determined by the Office of Management and Budget, must have a central city with a population of 50,000 or more. The Cascade County MSA includes Great Falls and Cascade County is located in central Montana. The Missoula County MSA includes Missoula and Missoula County is located in western Montana. The Yellowstone County MSA includes Billings and Yellowstone County is located in south central Montana. This is the fourth year wage rates are available for the Cascade and Yellowstone County MSAs and the second year for the Missoula County MSA.

*Publication users will notice some jobs have wage rates for only certain areas. Wages rates for other areas are not available for those particular jobs. No other county level wage data is available for Montana. The wages contained in this publication cannot be used for Montana Prevailing Wage or Alien Labor Certification purposes.*

*Note: Wages in this publication may be slightly different from the wages published on the Bureau of Labor Statistics (BLS) website due to different rounding procedures.*

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<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
13-2011	Accountants and Auditors
23-1021	Administrative Law Judges, Adjudicators and Hearing Officers
11-3011	Administrative Services Managers
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors
11-2011	Advertising and Promotions Managers
41-3011	Advertising Sales Agents
45-2091	Agricultural Equipment Operators
53-2021	Air Traffic Controllers
53-1011	Aircraft Cargo Handling Supervisors
49-3011	Aircraft Mechanics and Service Technicians
53-2011	Airline Pilots, Copilots and Flight Engineers
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians
39-3091	Amusement and Recreation Attendants
29-1061	Anesthesiologists
33-9011	Animal Control Workers
19-3091	Anthropologists and Archeologists
13-2021	Appraisers and Assessors of Real Estate
23-1022	Arbitrators, Mediators and Conciliators
17-1011	Architects, Except Landscape and Naval
17-3011	Architectural and Civil Drafters
25-1121	Art, Drama and Music Teachers, Postsecondary
29-9091	Athletic Trainers
19-2021	Atmospheric and Space Scientists
27-4011	Audio and Video Equipment Technicians
49-3021	Automotive Body and Related Repairers
49-3022	Automotive Glass Installers and Repairers
49-3023	Automotive Service Technicians and Mechanics
39-6011	Baggage Porters and Bellhops
33-3011	Bailiffs
51-3011	Bakers
39-5011	Barbers
35-3011	Bartenders
49-3091	Bicycle Repairers
43-3011	Bill and Account Collectors
43-3021	Billing and Posting Clerks and Machine Operators
51-5011	Bindery Workers
25-1042	Biological Science Teachers, Postsecondary
19-4021	Biological Technicians
47-2011	Boilermakers
43-3031	Bookkeeping, Accounting and Auditing Clerks
47-2021	Brickmasons and Blockmasons
27-4012	Broadcast Technicians
43-4011	Brokerage Clerks
13-2031	Budget Analysts
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists
53-3022	Bus Drivers, School
53-3021	Bus Drivers, Transit and Intercity
25-1011	Business Teachers, Postsecondary
51-3021	Butchers and Meat Cutters
51-7011	Cabinetmakers and Bench Carpenters
27-4031	Camera Operators, Television, Video and Motion Picture
29-2031	Cardiovascular Technologists and Technicians
43-5011	Cargo and Freight Agents

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
47-2031	Carpenters
47-2041	Carpet Installers
17-1021	Cartographers and Photogrammetrists
41-2011	Cashiers
47-2051	Cement Masons and Concrete Finishers
51-9191	Cementing and Gluing Machine Operators and Tenders
35-1011	Chefs and Head Cooks
17-2041	Chemical Engineers
51-8091	Chemical Plant and System Operators
19-4031	Chemical Technicians
25-1052	Chemistry Teachers, Postsecondary
19-2031	Chemists
11-1011	Chief Executives
39-9011	Child Care Workers
21-1021	Child, Family and School Social Workers
29-1011	Chiropractors
17-3022	Civil Engineering Technicians
17-2051	Civil Engineers
13-1031	Claims Adjusters, Examiners and Investigators
53-7061	Cleaners of Vehicles and Equipment
51-9192	Cleaning, Washing and Metal Pickling Equipment Operators and Tenders
21-2011	Clergy
19-3031	Clinical, Counseling and School Psychologists
27-2022	Coaches and Scouts
51-9121	Coating, Painting and Spraying Machine Setters, Operators and Tenders
51-2021	Coil Winders, Tapers and Finishers
49-9091	Coin, Vending and Amusement Machine Servicers and Repairers
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food
27-1021	Commercial and Industrial Designers
53-2012	Commercial Pilots
25-1122	Communications Teachers, Postsecondary
13-1072	Compensation, Benefits and Job Analysis Specialists
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
15-1011	Computer and Information Scientists, Research
11-3021	Computer and Information Systems Managers
17-2061	Computer Hardware Engineers
43-9011	Computer Operators
15-1021	Computer Programmers
25-1021	Computer Science Teachers, Postsecondary
15-1031	Computer Software Engineers, Applications
15-1032	Computer Software Engineers, Systems Software
15-1041	Computer Support Specialists
15-1051	Computer Systems Analysts
49-2011	Computer, Automated Teller and Office Machine Repairers
19-1031	Conservation Scientists
47-4011	Construction and Building Inspectors
47-2061	Construction Laborers
11-9021	Construction Managers
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door
53-7011	Conveyor Operators and Tenders
35-2011	Cooks, Fast Food
35-2012	Cooks, Institution and Cafeteria
35-2014	Cooks, Restaurant

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
35-2015	Cooks, Short Order
33-3012	Correctional Officers and Jailers
43-4021	Correspondence Clerks
13-1051	Cost Estimators
41-2021	Counter and Rental Clerks
35-3022	Counter Attendants, Cafeteria, Food Concession and Coffee Shop
43-5021	Couriers and Messengers
23-2091	Court Reporters
43-4031	Court, Municipal and License Clerks
53-7021	Crane and Tower Operators
13-2041	Credit Analysts
43-4041	Credit Authorizers, Checkers and Clerks
33-9091	Crossing Guards
51-9021	Crushing, Grinding and Polishing Machine Setters, Operators and Tenders
43-4051	Customer Service Representatives
51-9031	Cutters and Trimmers, Hand
51-4031	Cutting, Punching and Press Machine Setters, Operators and Tenders, Metal and Plastic
43-9021	Data Entry Keyers
15-1061	Database Administrators
41-9011	Demonstrators and Product Promoters
31-9091	Dental Assistants
29-2021	Dental Hygienists
51-9081	Dental Laboratory Technicians
43-9031	Desktop Publishers
33-3021	Detectives and Criminal Investigators
29-2032	Diagnostic Medical Sonographers
29-1031	Dietitians and Nutritionists
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers
21-2021	Directors, Religious Activities and Education
35-9021	Dishwashers
43-5032	Dispatchers, Except Police, Fire and Ambulance
41-9091	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers
53-3031	Driver/Sales Workers
47-2081	Drywall and Ceiling Tile Installers
47-5021	Earth Drillers, Except Oil and Gas
19-3011	Economists
27-3041	Editors
11-9032	Education Administrators, Elementary and Secondary School
11-9033	Education Administrators, Postsecondary
11-9031	Education Administrators, Preschool and Child Care Center/Program
21-1012	Educational, Vocational and School Counselors
49-2092	Electric Motor, Power Tool and Related Repairers
17-3023	Electrical and Electronic Engineering Technicians
51-2022	Electrical and Electronic Equipment Assemblers
17-3012	Electrical and Electronics Drafters
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment
17-2071	Electrical Engineers
49-9051	Electrical Power-Line Installers and Repairers
47-2111	Electricians
17-3024	Electro-Mechanical Technicians
49-2097	Electronic Home Entertainment Equipment Installers and Repairers
17-2072	Electronics Engineers, Except Computer



<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
25-2021	Elementary School Teachers, Except Special Education
43-4061	Eligibility Interviewers, Government Programs
39-4011	Embalmers
29-2041	Emergency Medical Technicians and Paramedics
13-1071	Employment, Recruitment and Placement Specialists
11-9041	Engineering Managers
25-1032	Engineering Teachers, Postsecondary
25-1123	English Language and Literature Teachers, Postsecondary
17-3025	Environmental Engineering Technicians
17-2081	Environmental Engineers
19-4091	Environmental Science and Protection Technicians, Including Health
19-2041	Environmental Scientists and Specialists, Including Health
53-7032	Excavating and Loading Machine and Dragline Operators
43-6011	Executive Secretaries and Administrative Assistants
47-5031	Explosives Workers, Ordnance Handling Experts and Blasters
51-9041	Extruding, Forming, Pressing and Compacting Machine Setters, Operators and Tenders
45-4021	Fallers
29-1062	Family and General Practitioners
25-9021	Farm and Home Management Advisors
49-3041	Farm Equipment Mechanics
11-9011	Farm, Ranch and Other Agricultural Managers
45-2092	Farmworkers and Laborers, Crop, Nursery and Greenhouse
45-2093	Farmworkers, Farm and Ranch Animals
47-4031	Fence Erectors
43-4071	File Clerks
27-4032	Film and Video Editors
13-2051	Financial Analysts
13-2061	Financial Examiners
11-3031	Financial Managers
33-2011	Firefighters
33-2021	Fire Inspectors and Investigators
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers
45-1011	First-Line Supervisors/Managers of Farming, Fishing and Forestry Workers
33-1021	First-Line Supervisors/Managers of Fire Fighting and Prevention Workers
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers
53-1021	First-Line Supervisors/Managers of Helpers, Laborers and Material Movers, Hand
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service and Groundskeeping Workers
49-1011	First-Line Supervisors/Managers of Mechanics, Installers and Repairers
41-1012	First-Line Supervisors/Managers of Non-Retail Sales Workers
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers
39-1021	First-Line Supervisors/Managers of Personal Service Workers
33-1012	First-Line Supervisors/Managers of Police and Detectives
51-1011	First-Line Supervisors/Managers of Production and Operating Workers
41-1011	First-Line Supervisors/Managers of Retail Sales Workers
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators
33-3031	Fish and Game Wardens
39-9031	Fitness Trainers and Aerobics Instructors
27-1023	Floral Designers
51-3092	Food Batchmakers
51-3093	Food Cooking Machine Operators and Tenders
35-2021	Food Preparation Workers
35-3041	Food Servers, Nonrestaurant

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
11-9051	Food Service Managers
19-4093	Forest and Conservation Technicians
19-1032	Foresters
51-4022	Forging Machine Setters, Operators and Tenders, Metal and Plastic
39-4021	Funeral Attendants
11-9061	Funeral Directors
51-9051	Furnace, Kiln, Oven, Drier and Kettle Operators and Tenders
51-7021	Furniture Finishers
39-3012	Gaming and Sports Book Writers and Runners
41-2012	Gaming Change Persons and Booth Cashiers
39-1011	Gaming Supervisors
53-7071	Gas Compressor and Gas Pumping Station Operators
11-1021	General and Operations Managers
19-4041	Geological and Petroleum Technicians
19-2042	Geoscientists, Except Hydrologists and Geographers
47-2121	Glaziers
45-2041	Graders and Sorters, Agricultural Products
27-1024	Graphic Designers
51-9022	Grinding and Polishing Workers, Hand
51-4033	Grinding, Lapping, Polishing and Buffing Machine Tool Setters, Operators and Tenders, Metal and Plastic
39-5012	Hairdressers, Hairstylists and Cosmetologists
47-4041	Hazardous Materials Removal Workers
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors
21-1091	Health Educators
25-1071	Health Specialties Teachers, Postsecondary
49-9021	Heating, Air Conditioning and Refrigeration Mechanics and Installers
47-3011	Helpers, Brickmasons, Blockmasons, Stonemasons and Tile and Marble Setters
47-3012	Helpers, Carpenters
47-3013	Helpers, Electricians
47-5081	Helpers, Extraction Workers
49-9098	Helpers, Installation, Maintenance and Repair Workers
47-3014	Helpers, Painters, Paperhangers, Plasterers and Stucco Masons
47-3015	Helpers, Pipelayers, Plumbers, Pipefitters and Steamfitters
51-9198	Helpers, Production Workers
47-4051	Highway Maintenance Workers
19-3093	Historians
25-1125	History Teachers, Postsecondary
49-9031	Home Appliance Repairers
31-1011	Home Health Aides
35-9031	Hosts and Hostesses, Restaurant, Lounge and Coffee Shop
43-4081	Hotel, Motel and Resort Desk Clerks
43-4161	Human Resources Assistants, Except Payroll and Timekeeping
19-2043	Hydrologists
17-3026	Industrial Engineering Technicians
17-2112	Industrial Engineers
49-9041	Industrial Machinery Mechanics
11-3051	Industrial Production Managers
53-7051	Industrial Truck and Tractor Operators
51-9061	Inspectors, Testers, Sorters, Samplers and Weighers
25-9031	Instructional Coordinators
43-9041	Insurance Claims and Policy Processing Clerks
41-3021	Insurance Sales Agents
27-1025	Interior Designers

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
29-1063	Internists, General
27-3091	Interpreters and Translators
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners
51-9071	Jewelers and Precious Stone and Metal Workers
51-5021	Job Printers
23-1023	Judges, Magistrate Judges and Magistrates
25-2012	Kindergarten Teachers, Except Special Education
53-7062	Laborers and Freight, Stock and Material Movers, Hand
17-1012	Landscape Architects
37-3011	Landscaping and Groundskeeping Workers
51-6011	Laundry and Dry-Cleaning Workers
23-2092	Law Clerks
23-1011	Lawyers
43-6012	Legal Secretaries
25-4021	Librarians
43-4121	Library Assistants, Clerical
25-4031	Library Technicians
29-2061	Licensed Practical and Licensed Vocational Nurses
13-2071	Loan Counselors
43-4131	Loan Interviewers and Clerks
13-2072	Loan Officers
39-3093	Locker Room, Coatroom and Dressing Room Attendants
53-4011	Locomotive Engineers
11-9081	Lodging Managers
45-4023	Log Graders and Scalers
45-4022	Logging Equipment Operators
53-7063	Machine Feeders and Offbearers
51-4041	Machinists
37-2012	Maids and Housekeeping Cleaners
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service
49-9042	Maintenance and Repair Workers, General
49-9043	Maintenance Workers, Machinery
13-1111	Management Analysts
39-5092	Manicurists and Pedicurists
49-9095	Manufactured Building and Mobile Home Installers
19-3021	Market Research Analysts
11-2021	Marketing Managers
21-1013	Marriage and Family Therapists
31-9011	Massage Therapists
25-1022	Mathematical Science Teachers, Postsecondary
51-3022	Meat, Poultry and Fish Cutters and Trimmers
49-9011	Mechanical Door Repairers
17-3013	Mechanical Drafters
17-3027	Mechanical Engineering Technicians
17-2141	Mechanical Engineers
29-2012	Medical and Clinical Laboratory Technicians
29-2011	Medical and Clinical Laboratory Technologists
11-9111	Medical and Health Services Managers
21-1022	Medical and Public Health Social Workers
51-9082	Medical Appliance Technicians
31-9092	Medical Assistants
31-9093	Medical Equipment Preparers
49-9062	Medical Equipment Repairers

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
29-2071	Medical Records and Health Information Technicians
19-1042	Medical Scientists, Except Epidemiologists
43-6013	Medical Secretaries
31-9094	Medical Transcriptionists
13-1121	Meeting and Convention Planners
21-1023	Mental Health and Substance Abuse Social Workers
21-1014	Mental Health Counselors
27-1026	Merchandise Displayers and Window Trimmers
51-4051	Metal-Refining Furnace Operators and Tenders
43-5041	Meter Readers, Utilities
19-1022	Microbiologists
25-2022	Middle School Teachers, Except Special and Vocational Education
51-4035	Milling and Planing Machine Setters, Operators and Tenders, Metal and Plastic
49-9044	Millwrights
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
51-9023	Mixing and Blending Machine Setters, Operators and Tenders
49-3042	Mobile Heavy Equipment Mechanics, Except Engines
51-9195	Molders, Shapers and Casters, Except Metal and Plastic
51-4072	Molding, Coremaking and Casting Machine Setters, Operators and Tenders, Metal and Plastic
39-3021	Motion Picture Projectionists
49-3051	Motorboat Mechanics
49-3052	Motorcycle Mechanics
27-1014	Multimedia Artists and Animators
51-4081	Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic
27-2042	Musicians and Singers
11-9121	Natural Sciences Managers
15-1071	Network and Computer Systems Administrators
15-1081	Network Systems and Data Communications Analysts
43-4141	New Accounts Clerks
29-2033	Nuclear Medicine Technologists
31-1012	Nursing Aides, Orderlies and Attendants
25-1072	Nursing Instructors and Teachers, Postsecondary
31-2012	Occupational Therapist Aides
31-2011	Occupational Therapist Assistants
29-1122	Occupational Therapists
43-9061	Office Clerks, General
43-9071	Office Machine Operators, Except Computer
47-2073	Operating Engineers and Other Construction Equipment Operators
51-9083	Ophthalmic Laboratory Technicians
29-2081	Opticians, Dispensing
29-1041	Optometrists
43-4151	Order Clerks
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics
51-9111	Packaging and Filling Machine Operators and Tenders
53-7064	Packers and Packagers, Hand
47-2141	Painters, Construction and Maintenance
51-9122	Painters, Transportation Equipment
51-9123	Painting, Coating and Decorating Workers
23-2011	Paralegals and Legal Assistants
53-6021	Parking Lot Attendants
41-2022	Parts Salespersons
47-2071	Paving, Surfacing and Tamping Equipment Operators
43-3051	Payroll and Timekeeping Clerks

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
39-9021	Personal and Home Care Aides
13-2052	Personal Financial Advisors
37-2021	Pest Control Workers
37-3012	Pesticide Handlers, Sprayers and Applicators, Vegetation
17-2171	Petroleum Engineers
51-8093	Petroleum Pump System Operators, Refinery Operators and Gaugers
29-1051	Pharmacists
31-9095	Pharmacy Aides
29-2052	Pharmacy Technicians
25-1126	Philosophy and Religion Teachers, Postsecondary
27-4021	Photographers
51-9132	Photographic Processing Machine Operators
31-2022	Physical Therapist Aides
31-2021	Physical Therapist Assistants
29-1123	Physical Therapists
29-1071	Physician Assistants
47-2151	Pipelayers
47-2152	Plumbers, Pipefitters and Steamfitters
33-3051	Police and Sheriff's Patrol Officers
43-5031	Police, Fire and Ambulance Dispatchers
43-5051	Postal Service Clerks
43-5052	Postal Service Mail Carriers
43-5053	Postal Service Mail Sorters, Processors and Processing Machine Operators
11-9131	Postmasters and Mail Superintendents
51-4052	Pourers and Casters, Metal
51-8012	Power Distributors and Dispatchers
51-8013	Power Plant Operators
51-5022	Prepress Technicians and Workers
25-2011	Preschool Teachers, Except Special Education
51-6021	Pressers, Textile, Garment and Related Materials
51-5023	Printing Machine Operators
33-9021	Private Detectives and Investigators
21-1092	Probation Officers and Correctional Treatment Specialists
43-3061	Procurement Clerks
27-2012	Producers and Directors
43-5061	Production, Planning and Expediting Clerks
43-9081	Proofreaders and Copy Markers
11-9141	Property, Real Estate and Community Association Managers
31-1013	Psychiatric Aides
25-1066	Psychology Teachers, Postsecondary
11-2031	Public Relations Managers
27-3031	Public Relations Specialists
53-7072	Pump Operators, Except Wellhead Pumpers
13-1021	Purchasing Agents and Buyers, Farm Products
13-1023	Purchasing Agents, Except Wholesale, Retail and Farm Products
11-3061	Purchasing Managers
29-1124	Radiation Therapists
29-2034	Radiologic Technologists and Technicians
53-4013	Rail Yard Engineers, Dinkey Operators and Hostlers
53-4021	Railroad Brake, Signal and Switch Operators
47-4061	Rail-Track Laying and Maintenance Equipment Operators
41-9021	Real Estate Brokers
41-9022	Real Estate Sales Agents

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
43-4171	Receptionists and Information Clerks
39-9032	Recreation Workers
29-1125	Recreational Therapists
49-3092	Recreational Vehicle Service Technicians
53-7081	Refuse and Recyclable Material Collectors
29-1111	Registered Nurses
21-1015	Rehabilitation Counselors
47-2171	Reinforcing Iron and Rebar Workers
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks
39-9041	Residential Advisors
29-1126	Respiratory Therapists
29-2054	Respiratory Therapy Technicians
41-2031	Retail Salespersons
47-5051	Rock Splitters, Quarry
47-2181	Roofers
47-5071	Roustabouts, Oil and Gas
41-9031	Sales Engineers
11-2022	Sales Managers
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
51-7041	Sawing Machine Setters, Operators and Tenders, Wood
25-2031	Secondary School Teachers, Except Special and Vocational Education
43-6014	Secretaries, Except Legal, Medical and Executive
41-3031	Securities, Commodities and Financial Services Sales Agents
49-2098	Security and Fire Alarm Systems Installers
33-9032	Security Guards
25-3021	Self-Enrichment Education Teachers
51-9012	Separating, Filtering, Clarifying, Precipitating and Still Machine Setters, Operators and Tenders
53-6031	Service Station Attendants
47-5013	Service Unit Operators, Oil, Gas and Mining
27-1027	Set and Exhibit Designers
51-6051	Sewers, Hand
51-6031	Sewing Machine Operators
47-2211	Sheet Metal Workers
43-5071	Shipping, Receiving and Traffic Clerks
51-3023	Slaughterers and Meat Packers
11-9151	Social and Community Service Managers
21-1093	Social and Human Service Assistants
25-1113	Social Work Teachers, Postsecondary
25-1067	Sociology Teachers, Postsecondary
25-2042	Special Education Teachers, Middle School
25-2041	Special Education Teachers, Preschool, Kindergarten and Elementary School
25-2043	Special Education Teachers, Secondary School
29-1127	Speech-Language Pathologists
51-8021	Stationary Engineers and Boiler Operators
43-9111	Statistical Assistants
15-2041	Statisticians
43-5081	Stock Clerks and Order Fillers
47-2022	Stonemasons
51-2041	Structural Metal Fabricators and Fitters
21-1011	Substance Abuse and Behavioral Disorder Counselors
29-1067	Surgeons
29-2055	Surgical Technologists

<b>Code</b>	<b>Alphabetical Listing of Occupations</b>
17-1022	Surveyors
43-2011	Switchboard Operators, Including Answering Service
51-6052	Tailors, Dressmakers and Custom Sewers
53-7121	Tank Car, Truck and Ship Loaders
47-2082	Tapers
13-2081	Tax Examiners, Collectors and Revenue Agents
13-2082	Tax Preparers
53-3041	Taxi Drivers and Chauffeurs
25-9041	Teacher Assistants
51-2092	Team Assemblers
27-3042	Technical Writers
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
49-9052	Telecommunications Line Installers and Repairers
41-9041	Telemarketers
43-3071	Tellers
47-2044	Tile and Marble Setters
49-3093	Tire Repairers and Changers
23-2093	Title Examiners, Abstractors and Searchers
51-4194	Tool Grinders, Filers and Sharpeners
39-6021	Tour Guides and Escorts
13-1073	Training and Development Specialists
53-6051	Transportation Inspectors
11-3071	Transportation, Storage and Distribution Managers
41-3041	Travel Agents
39-6022	Travel Guides
53-3032	Truck Drivers, Heavy and Tractor-Trailer
53-3033	Truck Drivers, Light Or Delivery Services
51-6093	Upholsterers
19-3051	Urban and Regional Planners
39-3031	Ushers, Lobby Attendants and Ticket Takers
29-1131	Veterinarians
31-9096	Veterinary Assistants and Laboratory Animal Caretakers
29-2056	Veterinary Technologists and Technicians
25-2023	Vocational Education Teachers, Middle School
25-1194	Vocational Education Teachers, Postsecondary
25-2032	Vocational Education Teachers, Secondary School
35-3031	Waiters and Waitresses
51-8031	Water and Liquid Waste Treatment Plant and System Operators
43-5111	Weighers, Measurers, Checkers and Samplers, Recordkeeping
51-4121	Welders, Cutters, Solderers and Brazers
53-7073	Wellhead Pumpers
13-1022	Wholesale and Retail Buyers, Except Farm Products
51-7042	Woodworking Machine Setters, Operators and Tenders, Except Sawing
43-9022	Word Processors and Typists
27-3043	Writers and Authors
19-1023	Zoologists and Wildlife Biologists

## Introduction

The Occupational Employment Statistics (OES) wage survey is an annual mail survey that measures occupational employment and wage rates for wage and salary workers in nonfarm establishments covered by unemployment insurance.

Occupational wage information is useful in business, educational and personal career planning:

- Montana employers use the information to determine wages and benefits they offer their employees.
- Out-of-state firms need to know what they need to pay employees if they relocate to Montana.
- Educational planners use the information for planning curriculums.
- School counselors use the information in career counseling.
- Individuals want to know what they should expect to be paid for work in a specific occupation.

The survey is conducted to help meet the need for standard local and national wage information. The Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) provide funding for the survey. BLS provides the procedures and technical support. Each state collects its own data.

The OES wage survey data presented in this publication has a fourth-quarter 2000 reference period and is based on information collected during the 1999 and 2000 surveys. The two years of sample responses for employment and wage data have been combined to produce these results. The 1999 wage data have been adjusted to the 2000 reference period by using the over-the-year wage change in the most applicable Employment Cost Index series.

Information is collected and presented for all industries. The OES, using the new Standard Occupational Classification (SOC) coding system, categorizes workers into 770 detailed occupations, although all 770 occupations may not be represented for Montana. The survey excludes the self-employed, owners/partners of unincorporated firms and unpaid family workers. Employees are reported in the occupation in which they are working—not necessarily that for which they were trained. Wages for the OES survey are straight-time, gross pay, and do **not** include any of the following:

- back pay
- jury duty pay
- nonproduction bonus (e.g. holiday bonus)
- overtime pay
- severance pay
- shift differential
- tuition repayments



Wage rates shown were compiled for Montana using a national survey system. No differentiation was made between union and nonunion, full time or part time, or between public and private employee wages. Reported average wages include wages paid to both entry and experienced workers. Comparisons with previous surveys may not be appropriate because of changes in data collection methodology.

Wages printed in this publication *cannot* be used for alien labor certification or prevailing wage purposes, or in place of any other official wage program. Some workers in some occupations must be paid prevailing wage rates when involved with public works contracts. *Official prevailing wage rates can be obtained from the Montana Department of Labor and Industry's Research and Analysis Bureau at any of the telephone numbers listed in the front of this publication or at our website at <http://rad.dli.state.mt.us/>.*

Employers were asked to report wages by occupation for each individual employee. The 12 wage ranges are shown below:

	A	B	C	D	E	F	G	H	I	J	K	L
Hourly (part time or full time)	Under \$6.75	\$6.75- \$8.49	\$8.50- \$10.74	\$10.75- \$13.49	\$13.50- \$16.99	\$17.00- \$21.49	\$21.50- \$27.24	\$27.25- \$34.49	\$34.50- \$43.74	\$43.75- \$55.49	\$55.50- \$69.99	\$70.00 and over
Annual (full time only)	Under \$14,040	\$14,040- \$17,679	\$17,680- \$22,359	\$22,360- \$28,079	\$28,080- \$35,359	\$35,360- \$44,719	\$44,720- \$56,679	\$56,680- \$71,759	\$71,760- \$90,999	\$91,000- \$115,439	\$115,440- \$145,599	\$145,600 and over

Please keep the following definitions in mind when reviewing the published wage rates:

- **Mean Wage:** A measure of central tendency. The sum of all values of all observations divided by the number of observations. It is also called the arithmetic average. If some values are far removed from the others (outlying), they can substantially influence the mean wage.
- **Median Wage:** Middle value when wages are arranged in order of increasing magnitude. One-half of the wages are above, and one-half of the wages are below the median wage.
- **Middle Range:** Lower bound is the 25th percentile value and higher bound is the 75th percentile value when wages are arranged in order of increasing magnitude. For the lower bound, one-quarter of the wages are below, and three-quarters of the wages are above the 25th percentile value. For the higher bound, three-quarters of the wages are below, and one-quarter of the wages are above the 75th percentile value.
- **Annual Average:** Annual average wages are the mean or average wages on an annualized basis.

## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Management Occupations</b>					
<b>Chief Executives</b>					
<b>11-1011</b>	U.S.	50.30	54.72	34.99 - *	104,630
	Montana	37.28	32.07	23.10 - 52.38	77,537
	Yellowstone County MSA	38.80	33.09	24.64 - 54.47	80,702
	Cascade County MSA	33.07	25.74	22.40 - 44.26	68,792
	Missoula County MSA	39.44	37.03	22.36 - 57.53	82,042
<b>General and Operations Managers</b>					
<b>11-1021</b>	U.S.	33.76	29.41	19.65 - 45.01	70,220
	Montana	21.84	18.91	12.71 - 27.36	45,427
	Yellowstone County MSA	22.59	19.44	13.07 - 27.21	46,996
	Cascade County MSA	21.46	20.47	12.45 - 28.00	44,639
	Missoula County MSA	26.70	23.15	14.81 - 34.24	55,536
<b>Advertising and Promotions Managers</b>					
<b>11-2011</b>	U.S.	29.93	25.66	17.48 - 39.13	62,260
	Montana	20.01	16.49	12.58 - 25.58	41,613
	Yellowstone County MSA	15.57	14.46	11.89 - 18.06	32,394
	Cascade County MSA	16.17	13.91	10.74 - 21.14	33,644
	Missoula County MSA	23.69	19.90	12.89 - 31.53	49,285
<b>Marketing Managers</b>					
<b>11-2021</b>	U.S.	36.23	34.25	23.79 - 47.09	75,360
	Montana	24.26	22.70	15.95 - 31.00	50,458
	Yellowstone County MSA	24.49	23.24	18.58 - 30.12	50,948
	Cascade County MSA	21.93	17.50	12.83 - 25.44	45,607
	Missoula County MSA	26.30	26.98	16.54 - 36.61	54,713
<b>Sales Managers</b>					
<b>11-2022</b>	U.S.	35.69	32.94	22.92 - 46.75	74,230
	Montana	24.28	23.08	15.86 - 30.61	50,502
	Yellowstone County MSA	23.87	22.24	15.64 - 26.78	49,642
	Cascade County MSA	19.92	17.20	12.33 - 27.74	41,424
	Missoula County MSA	28.38	24.37	15.97 - 37.07	59,033
<b>Public Relations Managers</b>					
<b>11-2031</b>	U.S.	29.54	26.22	19.57 - 36.60	61,430
	Montana	18.30	16.29	13.15 - 21.76	38,064
	Yellowstone County MSA	16.32	13.95	10.96 - 20.70	33,943
<b>Administrative Services Managers</b>					
<b>11-3011</b>	U.S.	25.31	22.63	15.65 - 32.51	52,650
	Montana	15.19	13.00	9.93 - 18.39	31,596
	Yellowstone County MSA	13.13	12.08	8.82 - 17.01	27,307
	Cascade County MSA	14.73	13.83	10.25 - 17.95	30,645
	Missoula County MSA	19.11	16.07	12.26 - 24.76	39,752

# indicates a wage greater than \$70 per hour or \$145,600 per year; \* indicates a wage estimate is not available

## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Computer and Information Systems Managers</b>					
<b>11-3021</b>	U.S.	38.58	37.90	28.67 - 48.47	80,250
	Montana	25.22	24.87	18.90 - 30.53	52,461
	Yellowstone County MSA	24.15	24.03	16.89 - 31.18	50,232
	Cascade County MSA	24.20	23.76	17.95 - 27.15	50,344
	Missoula County MSA	28.25	28.32	22.59 - 34.00	58,750
<b>Financial Managers</b>					
<b>11-3031</b>	U.S.	34.89	32.22	23.15 - 44.03	72,570
	Montana	22.44	19.98	14.55 - 28.27	46,676
	Yellowstone County MSA	26.70	22.14	16.51 - 32.86	55,546
	Cascade County MSA	23.51	22.05	17.09 - 28.64	48,894
	Missoula County MSA	25.31	21.40	17.27 - 31.99	52,651
<b>Industrial Production Managers</b>					
<b>11-3051</b>	U.S.	31.55	29.64	22.25 - 39.39	65,620
	Montana	21.96	19.03	13.73 - 25.65	45,668
	Yellowstone County MSA	28.86	19.02	13.35 - 48.69	60,032
	Missoula County MSA	20.42	19.33	16.23 - 23.19	42,468
<b>Purchasing Managers</b>					
<b>11-3061</b>	U.S.	27.64	25.50	18.64 - 34.36	57,500
	Montana	18.25	16.46	12.26 - 23.03	37,966
	Yellowstone County MSA	19.22	18.56	14.18 - 23.72	39,972
	Cascade County MSA	21.06	17.64	12.30 - 26.44	43,796
	Missoula County MSA	22.06	20.51	16.69 - 26.95	45,891
<b>Transportation, Storage and Distribution Managers</b>					
<b>11-3071</b>	U.S.	27.98	26.07	19.70 - 34.21	58,200
	Montana	24.08	23.30	15.20 - 28.52	50,080
	Yellowstone County MSA	22.95	22.24	15.17 - 26.98	47,746
	Missoula County MSA	22.03	22.47	14.15 - 26.50	45,828
<b>Farm, Ranch and Other Agricultural Managers</b>					
<b>11-9011</b>	U.S.	21.07	18.46	13.85 - 26.05	43,820
	Montana	14.29	15.13	13.90 - 16.29	29,716
<b>Construction Managers</b>					
<b>11-9021</b>	U.S.	30.43	28.00	21.50 - 36.78	63,290
	Montana	21.44	19.04	14.37 - 25.13	44,599
	Yellowstone County MSA	20.90	18.26	14.80 - 24.60	43,476
	Cascade County MSA	29.09	22.47	18.63 - 26.59	60,500
	Missoula County MSA	22.26	17.86	15.31 - 28.36	46,293

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Education Administrators, Preschool and Child Care Center/Program</b>					
<b>11-9031</b>	U.S.	17.47	14.62	10.97 - 21.22	36,330
	Montana	16.84	10.69	9.03 - 29.65	35,036
	Missoula County MSA	10.00	9.73	9.11 - 10.34	20,800
<b>Education Administrators, Elementary and Secondary School</b>					
<b>11-9032</b>	U.S.		annual wages only		68,940
	Montana		annual wages only		51,971
	Cascade County MSA		annual wages only		44,461
	Missoula County MSA		annual wages only		55,019
<b>Education Administrators, Postsecondary</b>					
<b>11-9033</b>	U.S.	31.14	28.60	20.72 - 39.70	64,770
	Montana	31.34	30.56	22.84 - 40.03	65,179
<b>Engineering Managers</b>					
<b>11-9041</b>	U.S.	41.08	40.42	31.93 - 50.78	85,450
	Montana	30.96	29.38	22.75 - 40.11	64,397
	Yellowstone County MSA	32.34	34.25	20.61 - 40.93	67,270
	Cascade County MSA	31.59	31.53	28.25 - 35.45	65,708
	Missoula County MSA	30.09	29.66	24.76 - 35.44	62,590
<b>Food Service Managers</b>					
<b>11-9051</b>	U.S.	16.51	15.25	11.78 - 19.71	34,350
	Montana	11.88	11.30	8.58 - 13.94	24,717
	Yellowstone County MSA	10.22	8.69	7.80 - 11.71	21,267
	Cascade County MSA	11.21	10.29	9.06 - 12.51	23,325
	Missoula County MSA	13.06	12.63	10.92 - 14.88	27,161
<b>Funeral Directors</b>					
<b>11-9061</b>	U.S.	23.40	19.76	14.75 - 27.54	48,680
	Montana	16.46	16.07	14.42 - 18.58	34,242
<b>Lodging Managers</b>					
<b>11-9081</b>	U.S.	16.73	14.79	11.38 - 20.11	34,800
	Montana	10.60	8.96	6.51 - 14.86	22,042
	Yellowstone County MSA	16.08	15.83	14.51 - 17.61	33,439
<b>Medical and Health Services Managers</b>					
<b>11-9111</b>	U.S.	29.63	27.10	21.38 - 34.88	61,640
	Montana	23.62	21.93	15.83 - 29.11	49,129
	Yellowstone County MSA	32.80	32.04	23.75 - 39.34	68,219
	Cascade County MSA	18.20	17.49	10.95 - 22.71	37,865
	Missoula County MSA	21.35	16.40	13.82 - 26.94	44,398

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Natural Sciences Managers</b>					
<b>11-9121</b>	U.S.	37.91	36.48	27.08 - 48.44	78,850
	Montana	26.70	24.99	21.19 - 31.52	55,531
	Yellowstone County MSA	30.00	28.99	20.78 - 37.04	62,398
	Cascade County MSA	23.18	23.40	20.91 - 25.59	48,208
<b>Postmasters and Mail Superintendents</b>					
<b>11-9131</b>	U.S.	22.24	21.28	18.61 - 26.30	46,260
	Montana	19.47	19.37	17.09 - 22.01	40,490
<b>Property, Real Estate and Community Association Managers</b>					
<b>11-9141</b>	U.S.	20.74	17.32	11.59 - 25.85	43,130
	Montana	16.90	10.59	7.62 - 24.64	35,152
	Yellowstone County MSA	19.51	18.06	7.47 - 31.44	40,583
	Missoula County MSA	18.52	20.94	7.68 - 27.24	38,520
<b>Social and Community Service Managers</b>					
<b>11-9151</b>	U.S.	20.46	18.81	14.33 - 25.06	42,550
	Montana	12.96	11.72	9.31 - 15.88	26,967
	Yellowstone County MSA	15.36	15.81	14.44 - 17.20	31,955
	Cascade County MSA	15.79	16.35	10.23 - 20.43	32,834
	Missoula County MSA	16.94	14.41	12.15 - 17.50	35,236
<b>Business and Financial Operations Occupations</b>					
<b>Purchasing Agents and Buyers, Farm Products</b>					
<b>13-1021</b>	U.S.	21.49	18.06	14.02 - 25.29	44,690
	Montana	14.60	12.82	11.38 - 16.43	30,376
<b>Wholesale and Retail Buyers, Except Farm Products</b>					
<b>13-1022</b>	U.S.	20.48	17.89	13.21 - 24.79	42,590
	Montana	12.22	10.40	8.57 - 13.30	25,420
	Yellowstone County MSA	12.47	11.40	9.73 - 13.88	25,934
	Missoula County MSA	13.21	10.09	8.36 - 13.76	27,475
<b>Purchasing Agents, Except Wholesale, Retail and Farm Products</b>					
<b>13-1023</b>	U.S.	21.23	19.89	15.41 - 25.88	44,160
	Montana	16.87	15.74	11.64 - 20.73	35,093
	Yellowstone County MSA	21.02	19.70	16.16 - 26.12	43,712
	Cascade County MSA	18.60	15.61	12.89 - 20.38	38,682
	Missoula County MSA	17.35	15.42	12.56 - 23.07	36,093

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Claims Adjusters, Examiners and Investigators</b>					
<b>13-1031</b>	U.S.	21.15	19.75	15.37 - 26.11	44,000
	Montana	23.65	22.98	16.78 - 30.65	49,200
	Cascade County MSA	21.27	21.97	19.43 - 24.41	44,243
	Missoula County MSA	31.86	32.15	29.16 - 36.13	66,266
<b>Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation</b>					
<b>13-1041</b>	U.S.	21.22	19.67	15.40 - 25.72	44,140
	Montana	16.45	15.60	13.38 - 18.80	34,215
	Yellowstone County MSA	22.43	20.07	15.47 - 28.49	46,652
	Cascade County MSA	14.63	14.56	12.61 - 16.25	30,420
<b>Cost Estimators</b>					
<b>13-1051</b>	U.S.	23.59	22.02	16.85 - 28.56	49,070
	Montana	18.27	16.70	14.67 - 21.61	38,012
	Yellowstone County MSA	15.61	15.94	13.09 - 18.74	32,470
	Cascade County MSA	17.56	16.26	13.78 - 20.55	36,517
	Missoula County MSA	21.90	22.35	16.25 - 25.35	45,557
<b>Employment, Recruitment and Placement Specialists</b>					
<b>13-1071</b>	U.S.	20.67	17.54	13.48 - 24.76	43,000
	Montana	15.14	14.43	11.92 - 16.74	31,494
	Yellowstone County MSA	19.02	16.08	10.45 - 25.11	39,568
	Cascade County MSA	14.29	13.98	12.14 - 16.01	29,715
	Missoula County MSA	14.43	13.96	10.43 - 16.88	30,023
<b>Compensation, Benefits and Job Analysis Specialists</b>					
<b>13-1072</b>	U.S.	21.37	20.03	15.44 - 25.78	44,450
	Montana	16.41	14.71	12.59 - 17.00	34,134
<b>Training and Development Specialists</b>					
<b>13-1073</b>	U.S.	20.95	19.63	14.64 - 26.15	43,580
	Montana	15.50	15.18	10.99 - 17.85	32,233
	Yellowstone County MSA	17.29	17.03	12.69 - 20.28	35,971
	Cascade County MSA	17.03	16.02	14.12 - 19.40	35,430
	Missoula County MSA	14.97	14.62	10.11 - 17.54	31,137
<b>Management Analysts</b>					
<b>13-1111</b>	U.S.	29.01	26.46	20.18 - 34.92	60,350
	Montana	24.44	22.87	17.63 - 30.60	50,836
	Cascade County MSA	21.58	19.72	16.52 - 25.23	44,897
	Missoula County MSA	28.17	27.15	20.51 - 34.23	58,596
<b>Meeting and Convention Planners</b>					
<b>13-1121</b>	U.S.	18.49	17.09	13.36 - 21.90	38,450
	Montana	12.62	12.09	10.50 - 13.64	26,241

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Accountants and Auditors</b>					
<b>13-2011</b>	U.S.	23.12	20.91	16.48 - 27.02	48,090
	Montana	17.46	15.55	12.42 - 19.98	36,320
	Yellowstone County MSA	15.99	15.38	12.35 - 19.18	33,258
	Cascade County MSA	15.79	15.14	12.49 - 18.40	32,835
	Missoula County MSA	20.06	16.52	14.05 - 22.69	41,731
<b>Appraisers and Assessors of Real Estate</b>					
<b>13-2021</b>	U.S.	20.05	18.41	13.53 - 25.01	41,700
	Montana	15.57	14.43	11.64 - 18.56	32,388
	Yellowstone County MSA	25.02	24.76	22.74 - 26.78	52,044
	Missoula County MSA	17.58	8.41	7.61 - 30.10	36,557
<b>Budget Analysts</b>					
<b>13-2031</b>	U.S.	24.56	23.25	18.46 - 29.34	51,080
	Montana	18.72	18.54	15.97 - 20.99	38,930
	Cascade County MSA	18.63	18.86	17.27 - 20.45	38,743
<b>Credit Analysts</b>					
<b>13-2041</b>	U.S.	21.87	19.32	14.67 - 26.34	45,490
	Montana	13.91	12.04	9.86 - 16.06	28,940
	Yellowstone County MSA	15.03	13.82	11.33 - 17.28	31,255
<b>Financial Analysts</b>					
<b>13-2051</b>	U.S.	28.73	25.20	19.33 - 34.06	59,760
	Montana	19.32	18.70	14.37 - 22.74	40,191
<b>Personal Financial Advisors</b>					
<b>13-2052</b>	U.S.	32.42	26.60	16.55 - 46.33	67,430
	Montana	31.70	26.87	16.09 - 49.29	65,944
	Yellowstone County MSA	31.04	27.63	16.53 - 48.11	64,566
<b>Financial Examiners</b>					
<b>13-2061</b>	U.S.	28.12	25.51	18.56 - 34.59	58,480
	Montana	23.04	20.70	15.45 - 30.22	47,915
<b>Loan Counselors</b>					
<b>13-2071</b>	U.S.	17.73	15.46	12.16 - 20.92	36,870
	Montana	22.62	19.85	16.47 - 25.25	47,039
<b>Loan Officers</b>					
<b>13-2072</b>	U.S.	22.96	19.92	14.72 - 27.52	47,760
	Montana	18.67	16.99	12.52 - 23.41	38,838
	Yellowstone County MSA	16.16	13.71	11.42 - 18.74	33,609
	Cascade County MSA	18.52	13.00	10.90 - 23.20	38,525
	Missoula County MSA	19.75	18.10	13.44 - 22.25	41,080

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Tax Examiners, Collectors and Revenue Agents</b>					
<b>13-2081</b>	U.S.	20.47	19.32	14.12 - 26.64	42,580
	Montana	18.81	18.08	11.88 - 25.27	39,120
	Cascade County MSA	18.42	19.01	13.74 - 23.59	38,308
<b>Tax Preparers</b>					
<b>13-2082</b>	U.S.	14.77	12.30	8.13 - 18.64	30,720
	Montana	12.37	12.54	11.81 - 13.28	25,732
<b>Computer and Mathematical Occupations</b>					
<b>Computer and Information Scientists, Research</b>					
<b>15-1011</b>	U.S.	35.30	33.94	26.30 - 43.26	73,430
	Montana	15.94	15.41	13.51 - 17.82	33,163
<b>Computer Programmers</b>					
<b>15-1021</b>	U.S.	29.31	27.69	21.56 - 35.82	60,970
	Montana	22.29	21.34	16.04 - 25.89	46,369
	Cascade County MSA	16.78	16.86	13.05 - 20.49	34,895
	Missoula County MSA	21.64	21.59	18.32 - 25.66	45,009
<b>Computer Software Engineers, Applications</b>					
<b>15-1031</b>	U.S.	33.80	32.53	25.67 - 41.10	70,300
	Montana	24.22	22.98	17.98 - 30.92	50,387
	Missoula County MSA	21.82	19.54	17.11 - 23.53	45,376
<b>Computer Software Engineers, Systems Software</b>					
<b>15-1032</b>	U.S.	34.08	33.43	26.18 - 41.60	70,890
	Montana	29.59	30.67	26.12 - 34.98	61,549
<b>Computer Support Specialists</b>					
<b>15-1041</b>	U.S.	19.08	17.53	13.31 - 23.29	39,680
	Montana	15.73	15.01	12.07 - 19.02	32,721
	Yellowstone County MSA	13.91	13.12	11.34 - 15.81	28,924
	Cascade County MSA	16.32	16.80	13.68 - 19.60	33,941
	Missoula County MSA	15.94	15.56	12.90 - 19.14	33,148
<b>Computer Systems Analysts</b>					
<b>15-1051</b>	U.S.	29.43	28.53	22.59 - 35.20	61,210
	Montana	23.38	23.11	18.92 - 27.56	48,625
	Yellowstone County MSA	23.73	23.99	18.53 - 29.59	49,361
	Cascade County MSA	21.78	22.31	18.80 - 25.21	45,303
	Missoula County MSA	23.63	23.48	18.00 - 29.37	49,157

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<b>Database Administrators</b>					
<b>15-1061</b>	U.S.	26.83	24.99	18.37 - 34.35	55,810
	Montana	15.80	14.38	11.59 - 18.09	32,870
	Cascade County MSA	17.12	16.03	13.63 - 21.03	35,601
	Missoula County MSA	16.55	14.07	12.30 - 22.08	34,419
<b>Network and Computer Systems Administrators</b>					
<b>15-1071</b>	U.S.	25.81	24.65	19.45 - 31.32	53,690
	Montana	19.31	19.25	17.47 - 21.04	40,173
	Yellowstone County MSA	19.23	18.36	15.17 - 23.11	39,996
	Cascade County MSA	18.83	17.02	14.22 - 22.57	39,171
	Missoula County MSA	20.49	19.63	17.16 - 22.98	42,619
<b>Network Systems and Data Communications Analysts</b>					
<b>15-1081</b>	U.S.	27.83	26.20	20.34 - 33.64	57,890
	Montana	16.53	16.44	10.44 - 20.37	34,392
	Yellowstone County MSA	14.26	13.78	9.53 - 17.68	29,656
	Cascade County MSA	16.67	17.65	13.53 - 20.44	34,666
<b>Statisticians</b>					
<b>15-2041</b>	U.S.	26.26	25.00	17.86 - 33.28	54,630
	Montana	17.55	15.49	12.25 - 22.87	36,510
<b>Architecture and Engineering Occupations</b>					
<b>Architects, Except Landscape and Naval</b>					
<b>17-1011</b>	U.S.	26.93	25.24	19.74 - 32.56	56,020
	Montana	28.88	23.99	18.90 - 45.40	60,077
	Missoula County MSA	31.30	25.25	20.38 - 47.65	65,102
<b>Landscape Architects</b>					
<b>17-1012</b>	U.S.	23.61	20.93	15.86 - 28.60	49,120
	Montana	21.86	23.34	15.99 - 26.11	45,470
<b>Cartographers and Photogrammetrists</b>					
<b>17-1021</b>	U.S.	19.98	18.95	14.04 - 24.97	41,560
	Montana	16.53	15.75	13.42 - 19.47	34,389
<b>Surveyors</b>					
<b>17-1022</b>	U.S.	18.78	17.64	12.73 - 23.57	39,060
	Montana	18.35	17.06	14.30 - 23.18	38,171
	Yellowstone County MSA	18.12	16.78	12.95 - 23.25	37,683
<b>Chemical Engineers</b>					
<b>17-2041</b>	U.S.	32.29	31.71	25.69 - 38.87	67,160
	Montana	31.73	31.95	26.97 - 36.99	65,991
	Yellowstone County MSA	33.01	33.48	27.99 - 39.00	68,653

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## 2000 Montana Occupational Wage Survey

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<b>Civil Engineers</b>					
<b>17-2051</b>	U.S.	28.07	26.80	21.70 - 33.40	58,380
	Montana	23.34	21.81	17.25 - 28.16	48,542
	Yellowstone County MSA	26.14	25.22	19.25 - 31.61	54,373
	Cascade County MSA	20.95	20.11	16.67 - 25.02	43,585
	Missoula County MSA	28.27	28.58	23.49 - 33.41	58,793
<b>Computer Hardware Engineers</b>					
<b>17-2061</b>	U.S.	33.70	32.36	25.46 - 41.48	70,100
	Montana	32.47	32.87	25.38 - 40.05	67,547
<b>Electrical Engineers</b>					
<b>17-2071</b>	U.S.	31.89	31.21	24.86 - 38.75	66,320
	Montana	23.70	26.36	10.68 - 31.68	49,287
	Yellowstone County MSA	32.26	31.28	25.69 - 38.66	67,108
	Cascade County MSA	21.24	19.54	17.43 - 23.06	44,188
<b>Electronics Engineers, Except Computer</b>					
<b>17-2072</b>	U.S.	31.97	31.17	25.21 - 38.44	66,490
	Montana	23.84	23.22	19.11 - 28.20	49,577
<b>Environmental Engineers</b>					
<b>17-2081</b>	U.S.	28.70	27.78	21.99 - 34.27	59,710
	Montana	23.39	22.67	17.44 - 27.09	48,643
	Yellowstone County MSA	26.81	24.65	17.96 - 32.93	55,767
	Cascade County MSA	18.32	17.50	14.81 - 22.04	38,106
	Missoula County MSA	23.41	23.11	18.36 - 26.68	48,702
<b>Health and Safety Engineers, Except Mining Safety Engineers and Inspectors</b>					
<b>17-2111</b>	U.S.	27.08	26.26	21.27 - 32.45	56,340
	Montana	25.69	26.77	16.89 - 33.21	53,436
<b>Industrial Engineers</b>					
<b>17-2112</b>	U.S.	28.80	28.16	22.85 - 34.16	59,900
	Montana	22.23	23.08	15.53 - 27.73	46,242
<b>Mechanical Engineers</b>					
<b>17-2141</b>	U.S.	29.26	28.23	22.88 - 35.02	60,860
	Montana	24.44	23.75	19.15 - 28.63	50,844
	Yellowstone County MSA	27.70	26.09	23.12 - 32.12	57,608
	Cascade County MSA	18.70	18.67	12.94 - 20.90	38,896
<b>Mining and Geological Engineers, Including Mining Safety Engineers</b>					
<b>17-2151</b>	U.S.	30.96	29.24	22.75 - 37.84	64,390
	Montana	23.93	24.16	22.37 - 25.94	49,766

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<b>Petroleum Engineers</b>					
<b>17-2171</b>	U.S.	38.42	37.94	29.14 - 48.18	79,910
	Montana	38.41	36.20	27.10 - 47.87	79,885
	Yellowstone County MSA	38.29	37.71	26.26 - 47.58	79,639
<b>Architectural and Civil Drafters</b>					
<b>17-3011</b>	U.S.	17.84	16.93	13.79 - 20.86	37,100
	Montana	15.83	14.69	12.19 - 18.51	32,931
	Yellowstone County MSA	16.56	15.04	12.57 - 21.07	34,450
	Cascade County MSA	18.52	17.62	13.67 - 23.71	38,522
	Missoula County MSA	13.47	12.97	11.78 - 14.99	28,008
<b>Electrical and Electronics Drafters</b>					
<b>17-3012</b>	U.S.	19.43	18.37	14.19 - 23.76	40,420
	Montana	19.51	18.97	14.54 - 24.68	40,584
	Yellowstone County MSA	20.08	19.33	14.16 - 26.36	41,761
<b>Mechanical Drafters</b>					
<b>17-3013</b>	U.S.	19.39	18.19	14.43 - 23.20	40,330
	Montana	14.06	12.63	10.42 - 16.89	29,240
<b>Civil Engineering Technicians</b>					
<b>17-3022</b>	U.S.	17.84	17.30	13.37 - 21.51	37,110
	Montana	12.36	11.79	8.46 - 15.68	25,700
	Cascade County MSA	12.05	11.55	8.56 - 15.22	25,061
<b>Electrical and Electronic Engineering Technicians</b>					
<b>17-3023</b>	U.S.	19.81	19.24	15.18 - 23.88	41,210
	Montana	19.51	19.82	15.40 - 23.79	40,583
	Yellowstone County MSA	21.37	22.50	17.67 - 25.37	44,451
	Missoula County MSA	19.63	19.62	14.49 - 24.34	40,837
<b>Electro-Mechanical Technicians</b>					
<b>17-3024</b>	U.S.	18.57	17.38	13.43 - 22.12	38,630
	Montana	16.32	15.98	12.99 - 19.59	33,953
<b>Environmental Engineering Technicians</b>					
<b>17-3025</b>	U.S.	17.55	16.35	12.78 - 21.01	36,500
	Montana	13.06	12.15	10.53 - 14.92	27,168
	Yellowstone County MSA	13.00	12.18	11.20 - 13.16	27,034
<b>Industrial Engineering Technicians</b>					
<b>17-3026</b>	U.S.	21.31	19.67	15.25 - 26.01	44,330
	Montana	25.59	25.14	20.69 - 30.97	53,220

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<b>Mechanical Engineering Technicians</b>					
<b>17-3027</b>	U.S.	19.93	19.03	15.25 - 23.72	41,460
	Montana	18.99	18.37	14.14 - 23.22	39,503
<b>Life, Physical and Social Science Occupations</b>					
<b>Microbiologists</b>					
<b>19-1022</b>	U.S.	25.50	23.51	18.32 - 31.20	53,040
	Montana	19.46	18.93	14.87 - 22.49	40,477
<b>Zoologists and Wildlife Biologists</b>					
<b>19-1023</b>	U.S.	21.94	21.15	16.43 - 26.45	45,630
	Montana	21.30	20.43	17.92 - 24.80	44,302
<b>Conservation Scientists</b>					
<b>19-1031</b>	U.S.	22.99	22.67	18.08 - 26.94	47,820
	Montana	22.45	22.85	18.52 - 26.02	46,702
<b>Foresters</b>					
<b>19-1032</b>	U.S.	21.62	20.98	16.71 - 25.84	44,970
	Montana	21.89	20.82	17.49 - 25.85	45,535
	Missoula County MSA	27.74	27.52	22.60 - 32.34	57,698
<b>Medical Scientists, Except Epidemiologists</b>					
<b>19-1042</b>	U.S.	30.49	27.79	19.88 - 38.28	63,430
	Montana	24.90	22.87	16.89 - 28.62	51,783
<b>Atmospheric and Space Scientists</b>					
<b>19-2021</b>	U.S.	28.01	28.13	19.13 - 34.97	58,270
	Montana	26.41	28.16	23.25 - 31.59	54,938
<b>Chemists</b>					
<b>19-2031</b>	U.S.	26.10	24.07	18.02 - 32.81	54,280
	Montana	21.32	16.62	14.02 - 25.34	44,346
<b>Environmental Scientists and Specialists, Including Health</b>					
<b>19-2041</b>	U.S.	23.12	21.24	16.62 - 28.12	48,090
	Montana	20.67	18.33	15.72 - 21.06	43,000
	Cascade County MSA	16.60	16.31	14.61 - 18.86	34,522
<b>Geoscientists, Except Hydrologists and Geographers</b>					
<b>19-2042</b>	U.S.	30.01	27.04	20.83 - 37.11	62,420
	Montana	36.86	33.65	20.04 - 57.76	76,660
	Yellowstone County MSA	26.58	28.97	14.08 - 39.71	55,281

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<b>Hydrologists</b>					
<b>19-2043</b>	U.S.	27.64	26.64	21.03 - 32.93	57,490
	Montana	21.40	19.52	15.18 - 26.55	44,517
	Missoula County MSA	22.79	23.99	16.90 - 27.01	47,394
<b>Economists</b>					
<b>19-3011</b>	U.S.	33.56	31.17	22.77 - 42.25	69,800
	Montana	28.62	30.15	27.90 - 32.40	59,536
<b>Market Research Analysts</b>					
<b>19-3021</b>	U.S.	27.21	24.61	17.80 - 34.45	56,600
	Montana	23.63	23.88	21.49 - 26.30	49,149
<b>Clinical, Counseling and School Psychologists</b>					
<b>19-3031</b>	U.S.	24.28	23.23	17.26 - 29.84	50,510
	Montana	18.68	17.11	15.00 - 20.74	38,845
	Yellowstone County MSA	17.37	16.31	14.38 - 20.15	36,130
	Cascade County MSA	21.75	20.49	18.50 - 23.79	45,243
	Missoula County MSA	19.02	17.62	15.34 - 20.09	39,566
<b>Urban and Regional Planners</b>					
<b>19-3051</b>	U.S.	23.36	22.36	17.55 - 27.84	48,590
	Montana	15.89	15.33	12.83 - 18.37	33,057
	Cascade County MSA	15.23	14.54	12.35 - 17.45	31,670
<b>Anthropologists and Archeologists</b>					
<b>19-3091</b>	U.S.	18.87	17.33	12.84 - 23.33	39,250
	Montana	20.05	19.46	14.87 - 25.06	41,708
<b>Historians</b>					
<b>19-3093</b>	U.S.	20.25	19.16	13.66 - 26.06	42,120
	Montana	17.15	17.18	14.66 - 19.95	35,668
	Missoula County MSA	16.42	17.12	12.74 - 19.87	34,152
<b>Biological Technicians</b>					
<b>19-4021</b>	U.S.	15.85	15.16	12.05 - 19.16	32,970
	Montana	14.04	13.20	10.89 - 16.50	29,204
	Cascade County MSA	13.38	12.56	10.85 - 15.77	27,832
	Missoula County MSA	14.09	13.22	10.86 - 16.20	29,308
<b>Chemical Technicians</b>					
<b>19-4031</b>	U.S.	17.83	17.05	13.33 - 21.66	37,080
	Montana	14.14	12.02	8.33 - 18.89	29,404
	Yellowstone County MSA	13.63	10.13	7.56 - 15.71	28,361

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<b>Geological and Petroleum Technicians</b>					
<b>19-4041</b>	U.S.	19.11	17.55	13.88 - 23.63	39,760
	Montana	16.93	16.15	14.77 - 18.50	35,206
<b>Environmental Science and Protection Technicians, Including Health</b>					
<b>19-4091</b>	U.S.	17.23	16.26	12.50 - 21.13	35,830
	Montana	12.91	12.93	10.35 - 15.44	26,856
	Missoula County MSA	13.60	14.39	11.67 - 15.69	28,284
<b>Forest and Conservation Technicians</b>					
<b>19-4093</b>	U.S.	15.01	14.22	11.23 - 17.53	31,210
	Montana	14.07	13.51	10.75 - 16.82	29,260
<b>Community and Social Services Occupations</b>					
<b>Substance Abuse and Behavioral Disorder Counselors</b>					
<b>21-1011</b>	U.S.	14.47	13.71	11.19 - 16.95	30,100
	Montana	11.91	12.28	8.31 - 14.49	24,782
	Yellowstone County MSA	10.79	10.80	6.49 - 13.83	22,435
	Missoula County MSA	13.07	13.05	11.58 - 15.18	27,180
<b>Educational, Vocational and School Counselors</b>					
<b>21-1012</b>	U.S.	21.08	20.24	15.21 - 25.93	43,850
	Montana	14.96	15.39	10.96 - 18.98	31,121
	Cascade County MSA	15.23	15.08	12.74 - 17.41	31,678
	Missoula County MSA	13.13	13.96	8.49 - 16.27	27,312
<b>Marriage and Family Therapists</b>					
<b>21-1013</b>	U.S.	17.66	16.66	13.45 - 21.31	36,730
	Montana	15.09	15.07	13.10 - 16.65	31,382
<b>Mental Health Counselors</b>					
<b>21-1014</b>	U.S.	14.61	13.25	10.68 - 17.38	30,390
	Montana	13.28	12.99	9.93 - 15.96	27,630
	Yellowstone County MSA	9.59	9.52	8.81 - 10.24	19,942
<b>Rehabilitation Counselors</b>					
<b>21-1015</b>	U.S.	13.06	11.75	9.17 - 15.86	27,170
	Montana	11.04	11.42	7.80 - 13.70	22,956
	Yellowstone County MSA	9.62	9.25	7.87 - 11.61	20,007
	Cascade County MSA	14.05	14.46	12.22 - 16.19	29,230
	Missoula County MSA	11.18	12.29	11.10 - 13.38	23,263

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Child, Family and School Social Workers</b>					
<b>21-1021</b>	U.S.	16.12	15.13	11.98 - 19.31	33,530
	Montana	11.50	10.32	9.09 - 12.85	23,916
	Yellowstone County MSA	10.81	9.81	8.18 - 12.67	22,493
	Cascade County MSA	11.20	10.20	8.13 - 13.54	23,290
	Missoula County MSA	12.50	12.34	11.43 - 13.25	26,010
<b>Medical and Public Health Social Workers</b>					
<b>21-1022</b>	U.S.	17.50	16.73	13.37 - 20.89	36,400
	Montana	14.81	15.15	11.27 - 18.30	30,799
	Yellowstone County MSA	16.04	16.33	13.51 - 18.79	33,354
	Missoula County MSA	17.01	17.68	14.97 - 19.59	35,384
<b>Mental Health and Substance Abuse Social Workers</b>					
<b>21-1023</b>	U.S.	15.50	14.50	11.46 - 18.84	32,240
	Montana	12.95	12.07	10.11 - 14.55	26,928
<b>Health Educators</b>					
<b>21-1091</b>	U.S.	17.61	16.28	12.30 - 21.56	36,640
	Montana	15.10	15.15	11.89 - 18.83	31,404
	Yellowstone County MSA	18.44	18.22	16.16 - 20.10	38,365
<b>Probation Officers and Correctional Treatment Specialists</b>					
<b>21-1092</b>	U.S.	19.35	18.34	14.55 - 23.57	40,240
	Montana	15.05	15.04	12.72 - 17.31	31,304
	Yellowstone County MSA	15.88	15.92	14.41 - 17.43	33,029
	Cascade County MSA	14.88	14.70	12.53 - 16.98	30,949
<b>Social and Human Service Assistants</b>					
<b>21-1093</b>	U.S.	11.46	10.74	8.57 - 13.43	23,840
	Montana	9.78	9.72	7.47 - 12.04	20,345
	Yellowstone County MSA	7.99	7.56	6.48 - 9.31	16,622
	Cascade County MSA	9.10	8.91	7.73 - 10.21	18,920
	Missoula County MSA	11.54	11.82	10.51 - 13.06	24,004
<b>Clergy</b>					
<b>21-2011</b>	U.S.	16.23	15.27	10.98 - 20.28	33,760
	Montana	13.86	12.38	10.02 - 16.93	28,839
	Yellowstone County MSA	18.91	19.24	13.75 - 23.68	39,342
	Cascade County MSA	15.11	15.48	11.11 - 18.33	31,430
<b>Directors, Religious Activities and Education</b>					
<b>21-2021</b>	U.S.	14.38	12.98	9.32 - 17.59	29,900
	Montana	9.12	8.18	6.40 - 10.71	18,961
	Yellowstone County MSA	9.24	6.22	5.70 - 6.74	19,226
	Cascade County MSA	11.96	10.98	9.69 - 13.58	24,882

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Legal Occupations</b>					
<b>Lawyers</b>					
<b>23-1011</b>	U.S.	43.90	42.44	29.18 - 62.58	91,320
	Montana	24.73	20.14	15.65 - 29.81	51,435
	Yellowstone County MSA	33.53	26.93	19.94 - 48.86	69,750
	Cascade County MSA	28.36	25.20	20.79 - 37.44	58,989
<b>Administrative Law Judges, Adjudicators and Hearing Officers</b>					
<b>23-1021</b>	U.S.	31.32	29.44	20.60 - 40.15	65,150
	Montana	26.55	21.75	17.96 - 31.89	55,232
<b>Arbitrators, Mediators and Conciliators</b>					
<b>23-1022</b>	U.S.	24.68	20.70	14.89 - 29.50	51,330
	Montana	17.09	18.40	16.39 - 19.97	35,542
<b>Judges, Magistrate Judges and Magistrates</b>					
<b>23-1023</b>	U.S.	37.85	41.71	20.57 - 54.53	78,720
	Montana	14.07	12.83	10.03 - 18.26	29,273
<b>Paralegals and Legal Assistants</b>					
<b>23-2011</b>	U.S.	18.65	17.00	13.80 - 21.64	38,790
	Montana	14.03	12.87	10.79 - 16.36	29,183
	Cascade County MSA	13.09	12.50	11.22 - 14.06	27,218
<b>Court Reporters</b>					
<b>23-2091</b>	U.S.	20.06	19.07	13.77 - 24.87	41,730
	Montana	15.29	15.53	14.23 - 16.83	31,799
<b>Law Clerks</b>					
<b>23-2092</b>	U.S.	15.17	13.71	10.37 - 17.78	31,550
	Montana	13.02	12.15	8.53 - 16.02	27,073
<b>Title Examiners, Abstractors and Searchers</b>					
<b>23-2093</b>	U.S.	16.32	14.40	11.12 - 19.46	33,940
	Montana	10.75	10.68	8.48 - 13.26	22,352
	Missoula County MSA	12.52	11.39	9.96 - 15.19	26,046

### Education, Training and Library Occupations

#### Business Teachers, Postsecondary

<b>25-1011</b>	U.S.	annual wages only			58,160
	Montana	annual wages only			69,541

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Computer Science Teachers, Postsecondary</b>					
<b>25-1021</b>	U.S.		annual wages only		51,260
	Montana		annual wages only		45,681
<b>Mathematical Science Teachers, Postsecondary</b>					
<b>25-1022</b>	U.S.		annual wages only		51,410
	Montana		annual wages only		50,810
<b>Engineering Teachers, Postsecondary</b>					
<b>25-1032</b>	U.S.		annual wages only		67,540
	Montana		annual wages only		58,209
<b>Biological Science Teachers, Postsecondary</b>					
<b>25-1042</b>	U.S.		annual wages only		61,460
	Montana		annual wages only		65,455
<b>Chemistry Teachers, Postsecondary</b>					
<b>25-1052</b>	U.S.		annual wages only		56,550
	Montana		annual wages only		66,633
<b>Psychology Teachers, Postsecondary</b>					
<b>25-1066</b>	U.S.		annual wages only		55,170
	Montana		annual wages only		59,612
<b>Sociology Teachers, Postsecondary</b>					
<b>25-1067</b>	U.S.		annual wages only		50,890
	Montana		annual wages only		56,675
<b>Health Specialties Teachers, Postsecondary</b>					
<b>25-1071</b>	U.S.		annual wages only		67,140
	Montana		annual wages only		58,864
<b>Nursing Instructors and Teachers, Postsecondary</b>					
<b>25-1072</b>	U.S.		annual wages only		49,130
	Montana		annual wages only		44,252
<b>Social Work Teachers, Postsecondary</b>					
<b>25-1113</b>	U.S.		annual wages only		50,970
	Montana		annual wages only		44,263
<b>Art, Drama and Music Teachers, Postsecondary</b>					
<b>25-1121</b>	U.S.		annual wages only		49,170
	Montana		annual wages only		50,463

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Communications Teachers, Postsecondary</b> <b>25-1122</b>	U.S.		annual wages only		48,900
	Montana		annual wages only		56,541
<b>English Language and Literature Teachers, Postsecondary</b> <b>25-1123</b>	U.S.		annual wages only		47,790
	Montana		annual wages only		41,567
<b>History Teachers, Postsecondary</b> <b>25-1125</b>	U.S.		annual wages only		52,280
	Montana		annual wages only		60,625
<b>Philosophy and Religion Teachers, Postsecondary</b> <b>25-1126</b>	U.S.		annual wages only		50,070
	Montana		annual wages only		68,394
<b>Vocational Education Teachers, Postsecondary</b> <b>25-1194</b>	U.S.	19.61	18.35	13.83 - 24.03	40,790
	Montana	17.40	18.03	13.67 - 21.71	36,193
	Cascade County MSA	13.88	8.41	7.58 - 20.13	28,878
	Missoula County MSA	25.89	25.98	23.37 - 30.06	53,843
<b>Preschool Teachers, Except Special Education</b> <b>25-2011</b>	U.S.		annual wages only		20,100
	Montana		annual wages only		17,058
	Missoula County MSA		annual wages only		17,864
<b>Kindergarten Teachers, Except Special Education</b> <b>25-2012</b>	U.S.		annual wages only		40,230
	Montana		annual wages only		33,059
	Missoula County MSA		annual wages only		34,638
<b>Elementary School Teachers, Except Special Education</b> <b>25-2021</b>	U.S.		annual wages only		41,980
	Montana		annual wages only		31,513
	Yellowstone County MSA		annual wages only		33,537
	Cascade County MSA		annual wages only		26,810
	Missoula County MSA		annual wages only		31,216
<b>Middle School Teachers, Except Special and Vocational Education</b> <b>25-2022</b>	U.S.		annual wages only		41,890
	Montana		annual wages only		30,092
	Yellowstone County MSA		annual wages only		33,438

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Vocational Education Teachers, Middle School</b>					
<b>25-2023</b>	U.S.		annual wages only		40,810
	Montana		annual wages only		28,607
<b>Secondary School Teachers, Except Special and Vocational Education</b>					
<b>25-2031</b>	U.S.		annual wages only		43,030
	Montana		annual wages only		28,761
	Yellowstone County MSA		annual wages only		31,925
<b>Vocational Education Teachers, Secondary School</b>					
<b>25-2032</b>	U.S.		annual wages only		43,240
	Montana		annual wages only		31,284
<b>Special Education Teachers, Preschool, Kindergarten and Elementary School</b>					
<b>25-2041</b>	U.S.		annual wages only		43,700
	Montana		annual wages only		30,595
	Missoula County MSA		annual wages only		37,451
<b>Special Education Teachers, Middle School</b>					
<b>25-2042</b>	U.S.		annual wages only		41,730
	Montana		annual wages only		32,034
	Missoula County MSA		annual wages only		28,319
<b>Special Education Teachers, Secondary School</b>					
<b>25-2043</b>	U.S.		annual wages only		44,100
	Montana		annual wages only		31,965
	Yellowstone County MSA		annual wages only		32,076
<b>Adult Literacy, Remedial Education, and GED Teachers and Instructors</b>					
<b>25-3011</b>	U.S.	17.45	16.12	12.20 - 21.17	36,300
	Montana	13.35	12.82	8.18 - 17.58	27,778
	Missoula County MSA	7.84	7.95	7.49 - 8.40	16,297
<b>Self-Enrichment Education Teachers</b>					
<b>25-3021</b>	U.S.	14.94	13.44	9.48 - 18.63	31,070
	Montana	11.80	10.75	9.11 - 14.57	24,534
	Missoula County MSA	13.07	14.25	9.98 - 16.06	27,182
<b>Librarians</b>					
<b>25-4021</b>	U.S.	20.54	20.05	15.79 - 25.06	42,730
	Montana	14.85	14.95	11.73 - 17.81	30,884
	Yellowstone County MSA	17.05	16.85	13.64 - 20.39	35,470
	Cascade County MSA	15.85	15.51	13.00 - 18.86	32,974
	Missoula County MSA	16.93	17.01	15.13 - 19.05	35,221

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Library Technicians</b>					
<b>25-4031</b>	U.S.	11.65	11.14	8.57 - 14.35	24,230
	Montana	9.02	8.96	7.19 - 10.51	18,768
	Cascade County MSA	9.08	9.30	7.98 - 10.28	18,896
	Missoula County MSA	10.41	10.31	9.09 - 11.97	21,658
<b>Farm and Home Management Advisors</b>					
<b>25-9021</b>	U.S.	18.45	17.45	12.44 - 23.82	38,370
	Montana	9.27	9.10	6.19 - 12.18	19,280
	Missoula County MSA	15.11	15.25	14.38 - 16.13	31,420
<b>Instructional Coordinators</b>					
<b>25-9031</b>	U.S.	22.27	21.27	15.46 - 28.12	46,320
	Montana	11.94	13.55	6.10 - 16.04	24,834
	Yellowstone County MSA	11.10	7.41	6.00 - 16.90	23,082
	Cascade County MSA	15.76	15.74	14.39 - 17.24	32,787
	Missoula County MSA	20.45	21.53	12.38 - 27.82	42,541
<b>Teacher Assistants</b>					
<b>25-9041</b>	U.S.		annual wages only		18,770
	Montana		annual wages only		15,991
	Cascade County MSA		annual wages only		15,929
	Missoula County MSA		annual wages only		16,831
<b>Arts, Design, Entertainment, Sports and Media Occupations</b>					
<b>Multimedia Artists and Animators</b>					
<b>27-1014</b>	U.S.	21.47	19.77	14.76 - 25.98	44,650
	Montana	19.73	19.75	13.30 - 25.12	41,044
<b>Commercial and Industrial Designers</b>					
<b>27-1021</b>	U.S.	24.55	23.45	17.53 - 30.83	51,060
	Montana	12.61	13.40	8.46 - 15.33	26,230
<b>Floral Designers</b>					
<b>27-1023</b>	U.S.	9.29	8.83	7.16 - 10.63	19,330
	Montana	7.28	7.29	6.40 - 8.08	15,145
	Missoula County MSA	8.11	8.07	6.79 - 9.57	16,861
<b>Graphic Designers</b>					
<b>27-1024</b>	U.S.	18.25	16.62	12.77 - 21.70	37,970
	Montana	13.14	12.74	10.58 - 15.32	27,330
	Yellowstone County MSA	12.84	12.24	9.96 - 15.53	26,710
	Cascade County MSA	12.52	12.36	10.31 - 14.33	26,048
	Missoula County MSA	15.29	13.81	12.51 - 17.92	31,808

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## 2000 Montana Occupational Wage Survey

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<b>Interior Designers</b>					
<b>27-1025</b>	U.S.	19.55	17.57	12.89 - 24.59	40,670
	Montana	15.25	13.13	10.67 - 18.51	31,719
<b>Merchandise Displayers and Window Trimmers</b>					
<b>27-1026</b>	U.S.	11.19	10.06	8.06 - 12.91	23,280
	Montana	9.41	9.00	7.45 - 10.18	19,579
<b>Set and Exhibit Designers</b>					
<b>27-1027</b>	U.S.	16.26	15.11	10.32 - 20.58	33,810
	Montana	11.71	11.76	10.86 - 12.68	24,351
<b>Producers and Directors</b>					
<b>27-2012</b>	U.S.		annual wages only		48,740
	Montana		annual wages only		37,119
	Yellowstone County MSA		annual wages only		36,606
	Missoula County MSA		annual wages only		36,024
<b>Coaches and Scouts</b>					
<b>27-2022</b>	U.S.		annual wages only		33,470
	Montana		annual wages only		25,873
<b>Musicians and Singers</b>					
<b>27-2042</b>	U.S.		annual wages only		44,520
	Montana		annual wages only		25,156
<b>Public Relations Specialists</b>					
<b>27-3031</b>	U.S.	21.01	19.03	14.24 - 25.78	43,700
	Montana	16.14	15.49	10.23 - 20.95	33,572
	Yellowstone County MSA	15.98	12.02	9.64 - 23.83	33,247
	Cascade County MSA	15.73	15.76	13.67 - 18.58	32,719
	Missoula County MSA	16.07	17.60	6.99 - 22.01	33,425
<b>Editors</b>					
<b>27-3041</b>	U.S.	21.32	18.93	13.88 - 26.12	44,350
	Montana	15.72	14.99	12.02 - 18.31	32,693
	Yellowstone County MSA	19.25	19.12	15.98 - 21.64	40,034
	Missoula County MSA	14.04	13.73	12.21 - 15.52	29,196
<b>Technical Writers</b>					
<b>27-3042</b>	U.S.	24.07	22.98	17.92 - 28.85	50,060
	Montana	20.51	19.32	14.85 - 26.67	42,665
<b>Writers and Authors</b>					
<b>27-3043</b>	U.S.	22.81	20.32	13.99 - 27.56	47,440
	Montana	13.48	10.52	9.19 - 17.79	28,043

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Interpreters and Translators</b>					
<b>27-3091</b>	U.S.	16.13	14.95	11.37 - 19.51	33,550
	Montana	13.43	11.35	9.80 - 18.18	27,944
<b>Audio and Video Equipment Technicians</b>					
<b>27-4011</b>	U.S.	17.72	14.57	10.57 - 21.62	36,860
	Montana	11.31	10.44	8.56 - 13.88	23,520
	Cascade County MSA	10.06	9.52	7.88 - 12.27	20,918
<b>Broadcast Technicians</b>					
<b>27-4012</b>	U.S.	15.89	12.96	8.68 - 21.35	33,060
	Montana	8.77	8.81	6.51 - 10.44	18,238
<b>Photographers</b>					
<b>27-4021</b>	U.S.	13.18	10.72	8.07 - 15.87	27,420
	Montana	10.89	10.16	8.26 - 13.23	22,653
	Yellowstone County MSA	10.44	10.82	6.96 - 13.03	21,721
<b>Camera Operators, Television, Video and Motion Picture</b>					
<b>27-4031</b>	U.S.	16.28	13.40	9.25 - 21.23	33,860
	Montana	13.49	14.75	12.75 - 16.08	28,070
	Missoula County MSA	14.08	15.03	13.97 - 16.09	29,295
<b>Film and Video Editors</b>					
<b>27-4032</b>	U.S.	19.81	16.42	11.92 - 25.00	41,200
	Montana	15.94	15.14	13.32 - 16.80	33,164
<b>Health Care Practitioners and Technical Occupations</b>					
<b>Chiropractors</b>					
<b>29-1011</b>	U.S.	35.96	32.23	21.17 - 50.73	74,790
	Montana	22.57	15.15	13.61 - 16.69	46,954
<b>Dietitians and Nutritionists</b>					
<b>29-1031</b>	U.S.	18.76	18.48	14.94 - 22.09	39,020
	Montana	17.32	17.58	14.64 - 20.63	36,025
<b>Optometrists</b>					
<b>29-1041</b>	U.S.	40.86	39.84	28.99 - 53.62	84,980
	Montana	41.11	41.16	25.87 - 51.32	85,499
<b>Pharmacists</b>					
<b>29-1051</b>	U.S.	33.39	34.11	29.74 - 39.27	69,440
	Montana	28.77	30.32	25.91 - 33.64	59,849
	Yellowstone County MSA	31.62	32.29	29.75 - 34.88	65,775
	Cascade County MSA	29.59	29.86	25.97 - 33.27	61,554
	Missoula County MSA	31.04	31.54	29.03 - 34.05	64,555

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range			Annual Average
<b>Anesthesiologists</b>							
<b>29-1061</b>	U.S.	62.35	*	61.34	-	*	129,680
	Montana	45.61	44.12	39.87	-	51.52	94,875
<b>Family and General Practitioners</b>							
<b>29-1062</b>	U.S.	51.82	54.89	42.43	-	*	107,780
	Montana	59.35	60.13	51.42	-	#	123,451
	Yellowstone County MSA	63.72	65.92	57.86	-	#	132,547
<b>Internists, General</b>							
<b>29-1063</b>	U.S.	59.22	68.46	53.80	-	*	123,180
	Montana	60.71	57.85	*	-	*	126,274
<b>Surgeons</b>							
<b>29-1067</b>	U.S.	66.06	*	*	-	*	137,400
	Montana	69.91	#	#	-	#	145,406
<b>Physician Assistants</b>							
<b>29-1071</b>	U.S.	29.17	29.76	23.06	-	35.52	60,680
	Montana	31.73	31.19	27.87	-	34.43	65,995
	Missoula County MSA	32.85	32.23	28.86	-	37.29	68,330
<b>Registered Nurses</b>							
<b>29-1111</b>	U.S.	22.31	21.56	18.21	-	25.96	46,410
	Montana	18.14	17.71	15.26	-	20.66	37,739
	Yellowstone County MSA	16.68	16.08	14.75	-	18.15	34,688
	Missoula County MSA	21.09	21.25	18.18	-	24.63	43,866
<b>Occupational Therapists</b>							
<b>29-1122</b>	U.S.	24.10	23.77	19.45	-	27.83	50,140
	Montana	20.19	21.06	17.32	-	24.88	41,985
	Yellowstone County MSA	24.33	23.99	19.64	-	29.16	50,614
	Cascade County MSA	19.52	18.36	15.41	-	23.67	40,607
	Missoula County MSA	23.41	22.87	19.97	-	25.61	48,699
<b>Physical Therapists</b>							
<b>29-1123</b>	U.S.	27.62	26.35	22.43	-	32.40	57,450
	Montana	23.89	23.75	20.99	-	26.27	49,681
	Yellowstone County MSA	26.55	25.24	23.44	-	27.05	55,219
	Cascade County MSA	24.86	24.24	20.93	-	27.29	51,699
	Missoula County MSA	22.46	23.13	20.65	-	25.22	46,713
<b>Radiation Therapists</b>							
<b>29-1124</b>	U.S.	25.59	22.82	19.04	-	27.14	53,230
	Montana	17.89	17.84	13.00	-	23.68	37,201

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Recreational Therapists</b>					
<b>29-1125</b>	U.S.	14.23	13.77	10.47 - 17.34	29,590
	Montana	10.53	8.97	6.86 - 11.85	21,900
<b>Respiratory Therapists</b>					
<b>29-1126</b>	U.S.	18.37	18.11	15.45 - 20.88	38,220
	Montana	15.21	15.02	12.59 - 17.60	31,644
	Missoula County MSA	18.07	18.89	17.48 - 20.30	37,579
<b>Speech-Language Pathologists</b>					
<b>29-1127</b>	U.S.	23.31	22.42	18.11 - 27.40	48,480
	Montana	22.45	21.29	18.42 - 24.88	46,702
	Missoula County MSA	26.22	23.49	20.57 - 26.21	54,536
<b>Veterinarians</b>					
<b>29-1131</b>	U.S.	32.99	29.28	22.61 - 40.49	68,620
	Montana	16.77	12.76	11.76 - 20.11	34,873
	Cascade County MSA	25.45	24.94	21.87 - 28.18	52,941
<b>Medical and Clinical Laboratory Technologists</b>					
<b>29-2011</b>	U.S.	19.84	19.48	16.45 - 22.82	41,260
	Montana	17.12	16.88	14.49 - 19.94	35,601
	Cascade County MSA	18.05	17.94	15.51 - 20.53	37,538
<b>Medical and Clinical Laboratory Technicians</b>					
<b>29-2012</b>	U.S.	13.93	13.24	10.70 - 16.50	28,970
	Montana	13.52	13.92	10.67 - 16.20	28,114
	Yellowstone County MSA	12.67	12.20	9.31 - 16.04	26,356
<b>Dental Hygienists</b>					
<b>29-2021</b>	U.S.	24.99	24.68	20.46 - 29.72	51,980
	Montana	23.77	24.28	22.79 - 25.77	49,446
<b>Cardiovascular Technologists and Technicians</b>					
<b>29-2031</b>	U.S.	16.81	16.03	11.82 - 20.89	34,960
	Montana	18.82	19.27	13.56 - 23.78	39,137
<b>Diagnostic Medical Sonographers</b>					
<b>29-2032</b>	U.S.	22.03	21.55	18.46 - 25.36	45,820
	Montana	20.76	20.29	18.28 - 23.09	43,172
<b>Nuclear Medicine Technologists</b>					
<b>29-2033</b>	U.S.	21.56	21.22	18.34 - 25.09	44,850
	Montana	19.31	19.33	16.70 - 21.89	40,168

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Radiologic Technologists and Technicians</b>					
<b>29-2034</b>	U.S.	17.93	17.31	14.53 - 20.85	37,290
	Montana	14.63	14.29	12.36 - 16.46	30,430
	Yellowstone County MSA	12.47	12.36	11.54 - 13.17	25,945
	Missoula County MSA	16.34	16.18	13.82 - 18.99	33,993
<b>Emergency Medical Technicians and Paramedics</b>					
<b>29-2041</b>	U.S.	11.89	10.80	8.62 - 14.07	24,740
	Montana	9.33	8.55	7.30 - 10.65	19,397
<b>Pharmacy Technicians</b>					
<b>29-2052</b>	U.S.	10.38	9.93	8.12 - 12.26	21,600
	Montana	10.53	10.68	8.91 - 12.35	21,900
	Yellowstone County MSA	10.84	11.14	9.10 - 12.68	22,547
	Cascade County MSA	11.75	11.11	10.00 - 13.56	24,447
	Missoula County MSA	10.07	10.25	8.69 - 11.82	20,943
<b>Respiratory Therapy Technicians</b>					
<b>29-2054</b>	U.S.	16.46	15.80	13.12 - 19.11	34,230
	Montana	16.43	16.47	14.56 - 18.97	34,178
<b>Surgical Technologists</b>					
<b>29-2055</b>	U.S.	14.26	13.95	11.78 - 16.42	29,660
	Montana	13.80	13.76	11.83 - 15.68	28,708
	Cascade County MSA	12.80	12.81	10.64 - 15.17	26,623
	Missoula County MSA	14.59	14.68	12.72 - 16.45	30,341
<b>Veterinary Technologists and Technicians</b>					
<b>29-2056</b>	U.S.	10.93	10.41	8.68 - 12.76	22,730
	Montana	10.15	9.19	8.08 - 10.36	21,115
	Yellowstone County MSA	8.73	8.64	7.79 - 9.89	18,168
<b>Licensed Practical and Licensed Vocational Nurses</b>					
<b>29-2061</b>	U.S.	14.65	14.15	11.98 - 16.73	30,470
	Montana	11.62	11.66	10.09 - 13.09	24,160
	Yellowstone County MSA	11.55	11.46	10.07 - 12.84	24,021
	Cascade County MSA	11.92	12.11	11.03 - 13.12	24,791
	Missoula County MSA	12.01	11.76	10.07 - 13.82	24,975
<b>Medical Records and Health Information Technicians</b>					
<b>29-2071</b>	U.S.	11.74	10.94	8.99 - 13.74	24,430
	Montana	10.14	9.39	7.82 - 11.81	21,097
	Yellowstone County MSA	9.29	8.84	7.68 - 10.56	19,317
	Cascade County MSA	9.69	8.79	7.14 - 11.01	20,154
	Missoula County MSA	11.13	9.50	7.88 - 14.62	23,156

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Opticians, Dispensing 29-2081</b>	U.S.	12.67	11.75	9.23 - 15.28	26,360
	Montana	11.18	11.84	8.79 - 13.02	23,246
	Yellowstone County MSA	10.59	10.88	7.94 - 12.81	22,032
	Cascade County MSA	10.73	11.39	9.37 - 12.47	22,309
	Missoula County MSA	11.71	12.29	11.37 - 13.20	24,352
<b>Athletic Trainers 29-9091</b>	U.S.		annual wages only		33,650
	Montana		annual wages only		29,178
<b>Health Care Support Occupations</b>					
<b>Home Health Aides 31-1011</b>	U.S.	8.71	8.23	7.13 - 9.88	18,110
	Montana	7.61	7.58	6.68 - 8.47	15,821
	Yellowstone County MSA	6.82	6.68	6.01 - 7.77	14,195
	Cascade County MSA	7.80	7.72	7.23 - 8.20	16,227
	Missoula County MSA	8.42	8.05	7.52 - 8.58	17,508
<b>Nursing Aides, Orderlies and Attendants 31-1012</b>	U.S.	9.18	8.89	7.51 - 10.59	19,100
	Montana	7.96	7.85	7.02 - 8.79	16,555
	Yellowstone County MSA	8.49	8.24	7.53 - 9.54	17,669
	Cascade County MSA	8.90	8.49	7.59 - 10.12	18,512
	Missoula County MSA	7.84	7.92	7.20 - 8.64	16,314
<b>Psychiatric Aides 31-1013</b>	U.S.	10.79	10.45	8.38 - 13.02	22,440
	Montana	10.99	10.40	8.60 - 13.27	22,851
<b>Occupational Therapist Assistants 31-2011</b>	U.S.	16.76	16.51	14.08 - 19.57	34,860
	Montana	13.78	13.97	11.96 - 15.94	28,672
<b>Occupational Therapist Aides 31-2012</b>	U.S.	11.21	9.96	7.94 - 13.69	23,330
	Montana	12.23	12.59	10.79 - 14.67	25,443
<b>Physical Therapist Assistants 31-2021</b>	U.S.	16.52	16.29	13.86 - 19.44	34,370
	Montana	14.14	13.54	9.34 - 17.82	29,403
<b>Physical Therapist Aides 31-2022</b>	U.S.	10.06	9.46	7.91 - 11.25	20,930
	Montana	8.20	8.39	6.76 - 9.73	17,050

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Massage Therapists</b>					
<b>31-9011</b>	U.S.	15.51	13.07	8.32 - 21.87	32,270
	Montana	10.13	9.35	6.68 - 10.26	21,073
<b>Dental Assistants</b>					
<b>31-9091</b>	U.S.	12.86	12.49	9.99 - 15.51	26,740
	Montana	10.79	10.48	9.39 - 12.21	22,448
	Cascade County MSA	10.63	10.09	9.34 - 11.03	22,110
	Missoula County MSA	10.86	10.29	8.86 - 12.97	22,596
<b>Medical Assistants</b>					
<b>31-9092</b>	U.S.	11.46	11.06	9.35 - 13.20	23,840
	Montana	10.24	9.80	8.42 - 11.60	21,298
	Yellowstone County MSA	10.36	10.00	8.71 - 11.87	21,554
	Cascade County MSA	10.37	9.98	9.07 - 11.11	21,561
	Missoula County MSA	11.76	11.61	9.74 - 13.29	24,458
<b>Medical Equipment Preparers</b>					
<b>31-9093</b>	U.S.	10.68	10.16	8.57 - 12.44	22,200
	Montana	10.15	10.26	8.67 - 11.76	21,106
<b>Medical Transcriptionists</b>					
<b>31-9094</b>	U.S.	12.37	12.15	10.07 - 14.41	25,720
	Montana	11.13	11.24	9.68 - 12.70	23,154
	Yellowstone County MSA	11.51	11.75	10.90 - 12.62	23,943
	Missoula County MSA	11.69	11.72	10.38 - 13.03	24,316
<b>Pharmacy Aides</b>					
<b>31-9095</b>	U.S.	9.10	8.52	7.16 - 10.58	18,930
	Montana	8.98	8.69	7.76 - 10.09	18,681
<b>Veterinary Assistants and Laboratory Animal Caretakers</b>					
<b>31-9096</b>	U.S.	8.55	8.00	6.76 - 9.80	17,790
	Montana	7.26	7.41	6.86 - 7.99	15,105
<b>Protective Service Occupations</b>					
<b>First-Line Supervisors/Managers of Police and Detectives</b>					
<b>33-1012</b>	U.S.	27.84	27.50	20.98 - 33.98	57,900
	Montana	17.75	16.85	12.40 - 21.40	36,912
	Yellowstone County MSA	24.00	22.17	19.61 - 27.23	49,910
	Cascade County MSA	23.03	21.26	18.13 - 26.32	47,896
<b>First-Line Supervisors/Managers of Fire Fighting and Prevention Workers</b>					
<b>33-1021</b>	U.S.	25.47	24.99	19.67 - 31.14	52,990
	Montana	17.90	18.12	14.03 - 22.80	37,222

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Firefighters</b>					
<b>33-2011</b>	U.S.	16.95	16.43	11.82 - 21.75	35,260
	Montana	9.18	6.56	5.85 - 13.37	19,099
<b>Fire Inspectors and Investigators</b>					
<b>33-2021</b>	U.S.	20.58	20.01	15.21 - 25.54	42,800
	Montana	16.65	16.67	14.85 - 18.76	34,630
<b>Bailiffs</b>					
<b>33-3011</b>	U.S.	15.85	14.99	10.91 - 20.82	32,960
	Montana	7.48	6.59	5.97 - 9.40	15,556
<b>Correctional Officers and Jailers</b>					
<b>33-3012</b>	U.S.	15.71	14.99	11.85 - 19.28	32,680
	Montana	11.33	11.14	9.39 - 13.17	23,571
<b>Detectives and Criminal Investigators</b>					
<b>33-3021</b>	U.S.	23.96	23.50	17.90 - 29.69	49,830
	Montana	23.20	21.75	18.20 - 30.25	48,247
	Missoula County MSA	20.70	19.48	17.88 - 21.09	43,048
<b>Fish and Game Wardens</b>					
<b>33-3031</b>	U.S.	21.14	19.20	15.65 - 23.31	43,970
	Montana	17.29	16.87	15.18 - 19.28	35,957
<b>Police and Sheriff's Patrol Officers</b>					
<b>33-3051</b>	U.S.	19.52	19.13	14.64 - 24.15	40,590
	Montana	14.89	14.78	12.45 - 17.15	30,975
	Yellowstone County MSA	17.08	16.61	15.23 - 18.85	35,526
<b>Animal Control Workers</b>					
<b>33-9011</b>	U.S.	11.76	11.06	8.69 - 14.11	24,450
	Montana	10.00	9.44	6.49 - 13.79	20,803
<b>Private Detectives and Investigators</b>					
<b>33-9021</b>	U.S.	14.74	12.86	9.63 - 18.38	30,650
	Montana	9.99	8.77	7.67 - 11.48	20,786
<b>Security Guards</b>					
<b>33-9032</b>	U.S.	9.36	8.45	7.18 - 10.55	19,470
	Montana	8.06	7.07	6.05 - 9.09	16,758
	Yellowstone County MSA	7.31	6.46	5.82 - 7.99	15,213
	Cascade County MSA	9.19	8.35	7.30 - 10.45	19,106
	Missoula County MSA	7.74	6.73	5.96 - 8.34	16,096

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<b>Crossing Guards</b>					
<b>33-9091</b>	U.S.	9.19	8.37	6.66 - 10.94	19,110
	Montana	10.11	8.77	6.91 - 14.39	21,039
	Yellowstone County MSA	12.04	14.34	6.92 - 15.99	25,040
<b>Food Preparation and Serving Related Occupations</b>					
<b>Chefs and Head Cooks</b>					
<b>35-1011</b>	U.S.	13.73	12.07	8.98 - 16.75	28,550
	Montana	12.65	11.52	9.78 - 14.95	26,309
	Yellowstone County MSA	12.12	12.48	8.74 - 15.28	25,200
	Missoula County MSA	11.39	10.43	9.39 - 13.13	23,683
<b>First-Line Supervisors/Managers of Food Preparation and Serving Workers</b>					
<b>35-1012</b>	U.S.	11.83	10.91	8.54 - 14.09	24,600
	Montana	9.33	8.51	7.47 - 11.01	19,405
	Yellowstone County MSA	8.48	8.16	6.92 - 9.95	17,631
	Cascade County MSA	9.11	9.10	7.80 - 10.42	18,946
	Missoula County MSA	11.96	11.87	9.09 - 13.75	24,886
<b>Cooks, Fast Food</b>					
<b>35-2011</b>	U.S.	6.78	6.53	5.90 - 7.53	14,100
	Montana	6.47	6.42	5.83 - 7.16	13,454
	Yellowstone County MSA	6.09	6.18	5.73 - 6.63	12,670
	Cascade County MSA	6.46	6.43	5.88 - 6.98	13,442
<b>Cooks, Institution and Cafeteria</b>					
<b>35-2012</b>	U.S.	8.68	8.22	6.70 - 10.24	18,060
	Montana	8.32	8.13	6.89 - 9.59	17,298
	Yellowstone County MSA	8.24	7.93	6.89 - 9.11	17,145
	Cascade County MSA	9.08	8.78	7.50 - 10.37	18,894
	Missoula County MSA	7.95	7.78	6.70 - 8.89	16,544
<b>Cooks, Restaurant</b>					
<b>35-2014</b>	U.S.	9.08	8.72	7.35 - 10.33	18,880
	Montana	7.95	7.78	6.86 - 8.87	16,546
	Yellowstone County MSA	7.74	7.74	6.62 - 8.83	16,097
	Cascade County MSA	7.73	7.26	6.40 - 8.26	16,077
	Missoula County MSA	7.80	7.83	7.15 - 8.51	16,223
<b>Cooks, Short Order</b>					
<b>35-2015</b>	U.S.	7.92	7.55	6.32 - 9.20	16,480
	Montana	6.56	6.33	5.76 - 7.31	13,635
	Yellowstone County MSA	7.07	7.27	6.34 - 8.02	14,699
	Cascade County MSA	7.57	7.63	6.41 - 8.70	15,741

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<b>Food Preparation Workers</b>					
<b>35-2021</b>	U.S.	7.78	7.38	6.28 - 8.81	16,180
	Montana	6.95	6.66	5.93 - 7.92	14,457
	Yellowstone County MSA	6.70	6.33	5.77 - 7.18	13,937
	Cascade County MSA	7.13	6.92	6.04 - 8.04	14,823
	Missoula County MSA	7.24	7.27	6.51 - 8.03	15,050
<b>Bartenders</b>					
<b>35-3011</b>	U.S.	7.77	6.86	6.10 - 8.44	16,150
	Montana	6.85	6.81	5.99 - 7.77	14,246
	Yellowstone County MSA	6.29	6.21	5.69 - 6.72	13,094
	Cascade County MSA	7.68	7.80	7.28 - 8.32	15,983
	Missoula County MSA	7.65	7.66	7.12 - 8.20	15,914
<b>Combined Food Preparation and Serving Workers, Including Fast Food</b>					
<b>35-3021</b>	U.S.	6.84	6.52	5.92 - 7.52	14,240
	Montana	6.64	6.51	5.87 - 7.41	13,802
	Yellowstone County MSA	6.24	6.23	5.75 - 6.72	12,979
	Cascade County MSA	6.10	6.20	5.76 - 6.64	12,693
	Missoula County MSA	7.38	6.91	6.00 - 8.22	15,361
<b>Counter Attendants, Cafeteria, Food Concession and Coffee Shop</b>					
<b>35-3022</b>	U.S.	7.23	6.72	6.07 - 8.05	15,030
	Montana	6.77	6.65	5.91 - 7.65	14,077
	Yellowstone County MSA	6.04	6.03	5.60 - 6.47	12,567
	Cascade County MSA	7.08	6.75	6.01 - 8.19	14,716
	Missoula County MSA	6.68	6.57	5.87 - 7.53	13,904
<b>Waiters and Waitresses</b>					
<b>35-3031</b>	U.S.	7.09	6.42	5.88 - 7.26	14,750
	Montana	6.10	6.07	5.63 - 6.51	12,683
	Yellowstone County MSA	6.23	6.17	5.71 - 6.62	12,956
	Cascade County MSA	6.73	6.29	5.79 - 6.82	14,005
	Missoula County MSA	6.00	6.09	5.67 - 6.52	12,487
<b>Food Servers, Nonrestaurant</b>					
<b>35-3041</b>	U.S.	7.77	7.07	6.16 - 8.87	16,170
	Montana	6.57	6.40	5.84 - 7.04	13,674
	Yellowstone County MSA	6.16	6.12	5.65 - 6.60	12,817
	Cascade County MSA	5.96	6.16	5.74 - 6.57	12,392
<b>Dining Room and Cafeteria Attendants and Bartender Helpers</b>					
<b>35-9011</b>	U.S.	6.95	6.53	5.97 - 7.62	14,460
	Montana	6.19	6.14	5.67 - 6.61	12,876
	Yellowstone County MSA	5.98	6.10	5.68 - 6.52	12,430
	Cascade County MSA	5.88	6.04	5.64 - 6.45	12,240
	Missoula County MSA	5.91	6.03	5.61 - 6.44	12,303

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Dishwashers</b>					
<b>35-9021</b>	U.S.	7.00	6.69	6.05 - 7.86	14,560
	Montana	6.05	6.10	5.65 - 6.55	12,581
	Yellowstone County MSA	5.97	6.10	5.68 - 6.53	12,425
	Cascade County MSA	5.90	6.07	5.67 - 6.48	12,281
	Missoula County MSA	6.00	6.08	5.64 - 6.52	12,483
<b>Hosts and Hostesses, Restaurant, Lounge and Coffee Shop</b>					
<b>35-9031</b>	U.S.	7.32	6.95	6.18 - 8.11	15,230
	Montana	6.84	6.45	5.83 - 7.89	14,236
	Yellowstone County MSA	5.96	6.07	5.64 - 6.49	12,398
	Cascade County MSA	6.68	6.71	5.94 - 7.59	13,903
	Missoula County MSA	6.22	6.25	5.76 - 6.74	12,932
<b>Building and Grounds Cleaning and Maintenance Occupations</b>					
<b>First-Line Supervisors/Managers of Housekeeping and Janitorial Workers</b>					
<b>37-1011</b>	U.S.	13.38	12.38	9.58 - 16.22	27,830
	Montana	10.93	10.79	8.34 - 12.76	22,724
	Yellowstone County MSA	10.88	8.46	7.51 - 14.49	22,636
	Cascade County MSA	9.75	8.68	6.11 - 12.35	20,275
	Missoula County MSA	12.22	11.86	9.87 - 14.19	25,413
<b>First-Line Supervisors/Managers of Landscaping, Lawn Service and Groundskeeping Workers</b>					
<b>37-1012</b>	U.S.	16.21	14.70	11.37 - 19.42	33,720
	Montana	12.11	11.11	8.89 - 13.38	25,195
	Yellowstone County MSA	10.09	9.65	7.83 - 12.14	20,988
	Missoula County MSA	13.28	11.05	9.26 - 18.18	27,613
<b>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</b>					
<b>37-2011</b>	U.S.	9.17	8.26	6.74 - 10.74	19,080
	Montana	7.98	7.61	6.38 - 9.27	16,600
	Yellowstone County MSA	7.53	6.68	5.98 - 8.75	15,668
	Cascade County MSA	8.27	7.85	6.61 - 9.65	17,206
	Missoula County MSA	8.04	7.85	7.18 - 8.56	16,724
<b>Maids and Housekeeping Cleaners</b>					
<b>37-2012</b>	U.S.	7.78	7.41	6.36 - 8.67	16,190
	Montana	6.93	6.65	5.95 - 7.86	14,416
	Yellowstone County MSA	6.53	6.38	5.78 - 7.28	13,588
	Cascade County MSA	6.51	6.42	5.88 - 6.95	13,537
	Missoula County MSA	8.22	8.37	7.11 - 9.62	17,104
<b>Pest Control Workers</b>					
<b>37-2021</b>	U.S.	11.55	10.65	8.73 - 13.58	24,020
	Montana	7.16	6.26	5.74 - 6.81	14,902

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Landscaping and Groundskeeping Workers</b>					
<b>37-3011</b>	U.S.	9.63	8.80	7.35 - 11.00	20,030
	Montana	8.07	7.54	6.42 - 8.94	16,781
	Yellowstone County MSA	8.64	7.40	6.18 - 10.30	17,982
	Cascade County MSA	7.81	7.34	6.41 - 8.44	16,252
	Missoula County MSA	8.19	7.95	7.04 - 9.22	17,044
<b>Pesticide Handlers, Sprayers and Applicators, Vegetation</b>					
<b>37-3012</b>	U.S.	11.74	11.11	9.13 - 13.48	24,410
	Montana	9.17	9.26	8.20 - 10.18	19,068
<b>Personal Care and Service Occupations</b>					
<b>Gaming Supervisors</b>					
<b>39-1011</b>	U.S.	18.35	18.22	14.03 - 22.74	38,170
	Montana	16.25	16.55	10.64 - 19.92	33,792
<b>First-Line Supervisors/Managers of Personal Service Workers</b>					
<b>39-1021</b>	U.S.	14.59	13.06	10.07 - 17.33	30,350
	Montana	10.62	8.88	6.39 - 15.29	22,079
	Yellowstone County MSA	9.66	9.19	6.06 - 10.68	20,097
	Cascade County MSA	10.55	6.65	6.00 - 18.18	21,937
<b>Gaming and Sports Book Writers and Runners</b>					
<b>39-3012</b>	U.S.	8.79	8.22	6.78 - 9.99	18,290
	Montana	6.60	6.58	5.87 - 7.50	13,736
<b>Motion Picture Projectionists</b>					
<b>39-3021</b>	U.S.	8.82	7.08	6.16 - 9.24	18,350
	Montana	6.68	6.59	5.89 - 7.58	13,890
<b>Ushers, Lobby Attendants and Ticket Takers</b>					
<b>39-3031</b>	U.S.	7.88	6.61	6.01 - 8.10	16,380
	Montana	6.80	6.35	5.80 - 6.98	14,150
<b>Amusement and Recreation Attendants</b>					
<b>39-3091</b>	U.S.	7.44	6.72	6.05 - 8.16	15,480
	Montana	6.87	6.44	5.87 - 7.28	14,280
	Yellowstone County MSA	7.51	6.05	5.60 - 6.50	15,626
	Cascade County MSA	10.62	8.78	6.08 - 15.29	22,081
<b>Locker Room, Coatroom and Dressing Room Attendants</b>					
<b>39-3093</b>	U.S.	8.08	7.62	6.54 - 8.93	16,810
	Montana	6.72	6.75	6.03 - 7.61	13,981

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Embalmers</b>					
<b>39-4011</b>	U.S.	16.81	15.80	12.43 - 20.08	34,970
	Montana	20.89	22.64	15.71 - 25.08	43,451
<b>Funeral Attendants</b>					
<b>39-4021</b>	U.S.	8.80	8.14	6.61 - 10.14	18,310
	Montana	7.97	7.52	6.67 - 8.35	16,568
<b>Barbers</b>					
<b>39-5011</b>	U.S.	9.78	8.53	6.53 - 11.80	20,340
	Montana	9.23	9.69	6.54 - 11.69	19,201
<b>Hairdressers, Hairstylists and Cosmetologists</b>					
<b>39-5012</b>	U.S.	9.96	8.49	6.73 - 11.50	20,710
	Montana	8.54	7.62	6.48 - 9.50	17,770
	Yellowstone County MSA	8.64	7.43	6.30 - 10.10	17,980
	Cascade County MSA	7.87	7.84	7.11 - 8.58	16,370
	Missoula County MSA	9.02	7.92	6.45 - 10.80	18,753
<b>Manicurists and Pedicurists</b>					
<b>39-5092</b>	U.S.	8.13	7.42	6.30 - 9.14	16,920
	Montana	6.95	6.16	5.68 - 6.65	14,455
<b>Baggage Porters and Bellhops</b>					
<b>39-6011</b>	U.S.	9.78	7.80	6.34 - 11.33	20,350
	Montana	11.88	11.28	6.44 - 16.85	24,705
	Yellowstone County MSA	14.88	17.94	8.48 - 19.72	30,949
<b>Tour Guides and Escorts</b>					
<b>39-6021</b>	U.S.	9.59	8.50	6.72 - 11.24	19,940
	Montana	7.00	7.01	6.33 - 7.81	14,557
	Cascade County MSA	6.33	6.36	5.83 - 6.89	13,171
<b>Travel Guides</b>					
<b>39-6022</b>	U.S.	14.90	12.12	9.67 - 16.03	30,990
	Montana	14.68	14.94	10.33 - 18.81	30,524
<b>Child Care Workers</b>					
<b>39-9011</b>	U.S.	7.86	7.43	6.30 - 9.09	16,350
	Montana	6.74	6.51	5.90 - 7.55	14,020
	Yellowstone County MSA	6.71	6.50	5.88 - 7.49	13,962
	Cascade County MSA	7.22	6.95	6.14 - 8.20	15,008
	Missoula County MSA	6.76	6.53	5.88 - 7.69	14,060

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Personal and Home Care Aides</b>					
<b>39-9021</b>	U.S.	7.67	7.50	6.43 - 8.53	15,960
	Montana	6.90	6.95	6.07 - 7.81	14,350
	Yellowstone County MSA	7.91	7.82	7.31 - 8.33	16,448
	Cascade County MSA	6.79	6.47	5.91 - 6.99	14,121
	Missoula County MSA	6.61	6.54	5.85 - 7.55	13,745
<b>Fitness Trainers and Aerobics Instructors</b>					
<b>39-9031</b>	U.S.	13.82	10.96	7.65 - 17.84	28,750
	Montana	8.33	7.07	6.07 - 10.04	17,334
	Yellowstone County MSA	7.81	6.76	6.00 - 9.18	16,244
	Cascade County MSA	10.27	9.93	6.38 - 12.57	21,355
	Missoula County MSA	6.64	6.14	5.65 - 6.63	13,804
<b>Recreation Workers</b>					
<b>39-9032</b>	U.S.	9.32	8.24	6.75 - 10.65	19,380
	Montana	8.67	7.94	6.55 - 10.18	18,043
	Missoula County MSA	11.08	10.13	7.55 - 13.89	23,049
<b>Residential Advisors</b>					
<b>39-9041</b>	U.S.	10.38	9.65	7.83 - 12.14	21,600
	Montana	10.16	9.45	7.67 - 10.89	21,140
	Cascade County MSA	7.92	6.38	5.86 - 6.90	16,476
<b>Sales and Related Occupations</b>					
<b>First-Line Supervisors/Managers of Retail Sales Workers</b>					
<b>41-1011</b>	U.S.	15.47	13.23	10.12 - 17.88	32,170
	Montana	13.22	10.91	8.86 - 15.22	27,489
	Yellowstone County MSA	15.97	12.60	9.68 - 19.33	33,216
	Cascade County MSA	12.81	11.24	8.79 - 15.04	26,636
	Missoula County MSA	12.85	10.78	9.26 - 14.05	26,737
<b>First-Line Supervisors/Managers of Non-Retail Sales Workers</b>					
<b>41-1012</b>	U.S.	27.33	23.54	15.99 - 34.99	56,850
	Montana	18.95	16.77	12.48 - 23.54	39,421
	Yellowstone County MSA	18.14	16.41	11.06 - 25.01	37,741
	Missoula County MSA	24.55	20.94	17.74 - 29.41	51,057
<b>Cashiers</b>					
<b>41-2011</b>	U.S.	7.56	6.95	6.14 - 8.27	15,730
	Montana	7.33	6.77	6.00 - 8.17	15,256
	Yellowstone County MSA	7.48	6.77	6.02 - 8.20	15,567
	Cascade County MSA	7.44	6.65	5.92 - 8.16	15,484
	Missoula County MSA	7.49	6.58	5.91 - 8.09	15,579

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Gaming Change Persons and Booth Cashiers</b>					
<b>41-2012</b>	U.S.	9.06	8.79	7.30 - 10.38	18,850
	Montana	6.40	6.33	5.75 - 7.14	13,306
	Cascade County MSA	6.23	6.19	5.67 - 6.71	12,962
<b>Counter and Rental Clerks</b>					
<b>41-2021</b>	U.S.	8.98	7.87	6.51 - 10.22	18,670
	Montana	7.30	7.00	6.14 - 8.08	15,189
	Yellowstone County MSA	7.84	7.49	6.65 - 8.36	16,315
	Cascade County MSA	6.95	6.55	5.92 - 7.63	14,460
	Missoula County MSA	6.97	6.69	5.95 - 7.73	14,492
<b>Parts Salespersons</b>					
<b>41-2022</b>	U.S.	12.12	10.85	8.25 - 14.91	25,210
	Montana	10.72	10.13	8.55 - 12.56	22,297
	Yellowstone County MSA	11.69	11.39	9.01 - 13.95	24,321
	Cascade County MSA	9.65	8.75	7.07 - 11.61	20,066
	Missoula County MSA	12.48	10.98	9.55 - 13.97	25,957
<b>Retail Salespersons</b>					
<b>41-2031</b>	U.S.	9.74	8.02	6.63 - 10.54	20,260
	Montana	8.64	7.17	6.14 - 9.10	17,979
	Yellowstone County MSA	10.05	7.80	6.44 - 10.32	20,899
	Cascade County MSA	9.33	7.89	6.28 - 10.84	19,405
	Missoula County MSA	8.88	7.21	6.18 - 8.81	18,466
<b>Advertising Sales Agents</b>					
<b>41-3011</b>	U.S.	21.62	17.24	12.07 - 26.77	44,960
	Montana	13.63	12.26	8.50 - 16.19	28,358
	Yellowstone County MSA	18.01	16.26	10.39 - 21.79	37,457
	Cascade County MSA	12.91	10.88	9.68 - 14.36	26,851
	Missoula County MSA	18.18	17.06	10.98 - 23.68	37,824
<b>Insurance Sales Agents</b>					
<b>41-3021</b>	U.S.	23.13	18.63	12.94 - 28.55	48,100
	Montana	22.03	13.25	10.47 - 26.63	45,812
	Cascade County MSA	39.62	29.71	23.95 - 60.80	82,399
<b>Securities, Commodities and Financial Services Sales Agents</b>					
<b>41-3031</b>	U.S.	33.85	26.96	16.17 - 51.83	70,410
	Montana	37.02	32.81	16.15 - 57.60	77,001
	Yellowstone County MSA	36.99	32.49	16.00 - 57.52	76,931
	Cascade County MSA	41.13	41.10	16.59 - 69.78	85,553

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Travel Agents</b>					
<b>41-3041</b>	U.S.	12.79	12.09	9.56 - 15.30	26,600
	Montana	10.47	10.63	8.64 - 12.40	21,781
	Yellowstone County MSA	8.04	8.02	7.14 - 9.16	16,714
	Cascade County MSA	8.69	8.62	7.02 - 10.40	18,072
	Missoula County MSA	11.95	11.18	9.60 - 13.90	24,863
<b>Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products</b>					
<b>41-4011</b>	U.S.	28.19	25.30	17.99 - 35.80	58,630
	Montana	23.95	16.64	9.51 - 29.81	49,822
	Yellowstone County MSA	26.65	19.68	17.33 - 24.05	55,425
	Cascade County MSA	18.67	18.33	15.04 - 23.95	38,842
<b>Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products</b>					
<b>41-4012</b>	U.S.	22.49	19.40	13.87 - 27.54	46,770
	Montana	17.04	14.90	11.57 - 19.72	35,446
	Yellowstone County MSA	18.06	16.85	13.07 - 20.88	37,565
	Cascade County MSA	15.22	13.13	11.12 - 16.50	31,668
	Missoula County MSA	16.92	16.08	12.46 - 20.04	35,189
<b>Demonstrators and Product Promoters</b>					
<b>41-9011</b>	U.S.	11.76	9.51	7.71 - 13.51	24,460
	Montana	7.23	7.27	6.35 - 8.08	15,029
	Yellowstone County MSA	6.36	6.22	5.78 - 6.65	13,226
<b>Real Estate Brokers</b>					
<b>41-9021</b>	U.S.	28.89	22.93	14.72 - 38.58	60,080
	Montana	39.19	39.27	36.85 - 41.68	81,508
<b>Real Estate Sales Agents</b>					
<b>41-9022</b>	U.S.	18.25	13.29	9.39 - 21.99	37,950
	Montana	12.71	8.08	7.40 - 15.14	26,442
	Missoula County MSA	17.99	22.50	9.33 - 25.94	37,428
<b>Sales Engineers</b>					
<b>41-9031</b>	U.S.	29.54	27.17	21.27 - 36.65	61,450
	Montana	31.10	28.22	22.58 - 37.15	64,692
<b>Telemarketers</b>					
<b>41-9041</b>	U.S.	10.32	9.06	7.40 - 11.91	21,460
	Montana	7.09	6.68	5.92 - 8.00	14,738
	Yellowstone County MSA	6.78	6.69	5.93 - 7.87	14,105
	Cascade County MSA	8.26	7.24	6.11 - 9.86	17,181
<b>Door-To-Door Sales Workers, News and Street Vendors, and Related Workers</b>					
<b>41-9091</b>	U.S.	14.05	11.56	7.77 - 17.47	29,220
	Montana	11.84	14.07	6.01 - 17.08	24,635

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Office and Administrative Support Occupations</b>					
<b>First-Line Supervisors/Managers of Office and Administrative Support Workers</b>					
<b>43-1011</b>	U.S.	18.95	17.51	13.50 - 22.76	39,410
	Montana	14.46	13.18	10.74 - 16.83	30,069
	Yellowstone County MSA	14.83	14.48	10.99 - 17.19	30,841
	Cascade County MSA	14.30	13.36	10.13 - 17.55	29,747
	Missoula County MSA	15.15	14.18	11.28 - 16.83	31,522
<b>Switchboard Operators, Including Answering Service</b>					
<b>43-2011</b>	U.S.	10.05	9.71	8.02 - 11.71	20,900
	Montana	8.59	8.32	7.36 - 9.81	17,873
	Yellowstone County MSA	9.12	8.82	7.62 - 10.31	18,964
	Cascade County MSA	7.11	7.00	6.19 - 8.02	14,799
	Missoula County MSA	8.83	8.57	7.57 - 9.99	18,360
<b>Bill and Account Collectors</b>					
<b>43-3011</b>	U.S.	12.82	12.17	9.90 - 15.01	26,670
	Montana	10.30	10.02	8.19 - 12.04	21,430
	Yellowstone County MSA	10.64	10.10	8.33 - 12.16	22,141
	Cascade County MSA	9.33	9.69	7.37 - 10.82	19,398
	Missoula County MSA	9.90	9.83	8.41 - 11.60	20,582
<b>Billing and Posting Clerks and Machine Operators</b>					
<b>43-3021</b>	U.S.	12.25	11.81	9.73 - 14.21	25,480
	Montana	10.32	9.70	8.11 - 11.86	21,475
	Yellowstone County MSA	10.17	9.61	8.25 - 11.13	21,162
	Cascade County MSA	9.75	9.32	7.74 - 11.16	20,288
	Missoula County MSA	8.48	7.70	6.07 - 10.43	17,640
<b>Bookkeeping, Accounting and Auditing Clerks</b>					
<b>43-3031</b>	U.S.	12.96	12.34	9.83 - 15.46	26,950
	Montana	10.13	9.88	8.04 - 11.95	21,081
	Yellowstone County MSA	10.81	10.26	8.59 - 12.67	22,482
	Cascade County MSA	10.36	10.14	8.66 - 11.94	21,553
	Missoula County MSA	10.65	10.15	8.88 - 12.33	22,147
<b>Payroll and Timekeeping Clerks</b>					
<b>43-3051</b>	U.S.	13.57	13.07	10.67 - 16.04	28,220
	Montana	10.71	10.20	8.18 - 12.72	22,272
	Yellowstone County MSA	10.91	10.81	8.71 - 13.04	22,695
	Cascade County MSA	10.33	10.22	8.81 - 12.01	21,482
	Missoula County MSA	11.25	11.03	9.07 - 13.39	23,396

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Procurement Clerks</b>					
<b>43-3061</b>	U.S.	13.64	13.33	10.69 - 16.07	28,380
	Montana	12.63	12.78	10.59 - 15.00	26,266
	Cascade County MSA	11.85	12.01	9.82 - 13.62	24,648
<b>Tellers</b>					
<b>43-3071</b>	U.S.	9.40	9.21	7.85 - 10.56	19,540
	Montana	7.98	7.73	7.04 - 8.42	16,601
	Yellowstone County MSA	8.21	8.04	7.39 - 8.86	17,068
	Cascade County MSA	8.83	7.89	7.14 - 8.78	18,357
	Missoula County MSA	8.13	7.89	7.27 - 8.53	16,919
<b>Brokerage Clerks</b>					
<b>43-4011</b>	U.S.	16.19	14.93	12.01 - 18.84	33,680
	Montana	12.74	12.27	10.84 - 13.88	26,509
	Yellowstone County MSA	13.71	12.92	11.45 - 15.21	28,510
<b>Correspondence Clerks</b>					
<b>43-4021</b>	U.S.	12.09	11.61	9.78 - 13.70	25,150
	Montana	11.71	11.94	10.07 - 13.29	24,361
	Yellowstone County MSA	11.82	12.12	9.76 - 13.57	24,577
<b>Court, Municipal and License Clerks</b>					
<b>43-4031</b>	U.S.	13.36	12.57	9.93 - 15.86	27,780
	Montana	10.37	10.25	8.70 - 12.09	21,576
	Cascade County MSA	10.53	10.44	8.53 - 12.32	21,892
<b>Credit Authorizers, Checkers and Clerks</b>					
<b>43-4041</b>	U.S.	12.70	11.81	9.52 - 15.03	26,420
	Montana	12.77	12.80	11.00 - 14.77	26,559
<b>Customer Service Representatives</b>					
<b>43-4051</b>	U.S.	12.75	11.83	9.42 - 15.25	26,530
	Montana	10.09	9.37	7.74 - 11.83	20,981
	Yellowstone County MSA	10.06	9.49	8.06 - 11.19	20,928
	Cascade County MSA	9.44	8.46	6.93 - 11.88	19,636
	Missoula County MSA	10.09	8.85	7.75 - 12.16	20,980
<b>Eligibility Interviewers, Government Programs</b>					
<b>43-4061</b>	U.S.	14.54	13.65	11.83 - 16.83	30,230
	Montana	12.64	12.92	10.78 - 14.99	26,295

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>File Clerks</b>					
<b>43-4071</b>	U.S.	9.49	8.99	7.41 - 10.87	19,730
	Montana	7.50	7.05	6.15 - 8.35	15,594
	Yellowstone County MSA	8.49	7.74	6.53 - 9.84	17,651
	Cascade County MSA	7.58	6.77	6.05 - 8.20	15,772
	Missoula County MSA	6.70	6.52	5.88 - 7.49	13,943
<b>Hotel, Motel and Resort Desk Clerks</b>					
<b>43-4081</b>	U.S.	8.22	7.87	6.83 - 9.25	17,100
	Montana	6.85	6.63	5.95 - 7.69	14,247
	Yellowstone County MSA	6.99	6.50	5.85 - 7.67	14,532
<b>Library Assistants, Clerical</b>					
<b>43-4121</b>	U.S.	9.32	8.65	6.78 - 11.26	19,380
	Montana	7.59	6.72	6.03 - 8.94	15,787
<b>Loan Interviewers and Clerks</b>					
<b>43-4131</b>	U.S.	13.40	12.70	10.36 - 15.77	27,870
	Montana	10.89	10.14	9.07 - 11.74	22,660
	Yellowstone County MSA	16.01	12.45	10.35 - 16.48	33,300
	Cascade County MSA	9.71	9.44	8.40 - 10.52	20,195
	Missoula County MSA	9.82	9.82	7.84 - 12.02	20,422
<b>New Accounts Clerks</b>					
<b>43-4141</b>	U.S.	11.71	11.10	9.53 - 13.35	24,370
	Montana	9.64	9.43	7.89 - 11.25	20,045
	Yellowstone County MSA	11.69	11.59	10.32 - 13.01	24,305
	Cascade County MSA	10.63	10.72	9.38 - 12.16	22,107
	Missoula County MSA	10.09	9.82	8.37 - 11.43	20,983
<b>Order Clerks</b>					
<b>43-4151</b>	U.S.	12.08	11.35	9.01 - 14.46	25,130
	Montana	9.92	9.13	7.71 - 10.82	20,627
	Yellowstone County MSA	9.97	9.18	7.94 - 10.72	20,743
	Cascade County MSA	9.33	8.62	7.70 - 10.17	19,403
	Missoula County MSA	10.61	9.52	8.18 - 11.05	22,067
<b>Human Resources Assistants, Except Payroll and Timekeeping</b>					
<b>43-4161</b>	U.S.	14.13	13.63	11.23 - 16.50	29,400
	Montana	11.93	11.87	9.55 - 14.33	24,805
	Yellowstone County MSA	12.75	12.78	10.81 - 15.12	26,513
	Cascade County MSA	11.65	11.21	9.76 - 13.46	24,225
	Missoula County MSA	13.83	14.04	11.37 - 16.27	28,775

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Receptionists and Information Clerks</b>					
<b>43-4171</b>	U.S.	9.99	9.63	7.86 - 11.73	20,780
	Montana	8.40	8.33	7.18 - 9.70	17,471
	Yellowstone County MSA	8.43	8.21	6.84 - 9.81	17,532
	Cascade County MSA	7.90	7.89	7.17 - 8.67	16,441
	Missoula County MSA	8.28	8.22	7.01 - 9.64	17,216
<b>Reservation and Transportation Ticket Agents and Travel Clerks</b>					
<b>43-4181</b>	U.S.	12.57	10.87	8.96 - 16.29	26,140
	Montana	11.57	9.21	8.03 - 13.01	24,068
	Yellowstone County MSA	11.02	9.53	7.57 - 12.97	22,916
<b>Cargo and Freight Agents</b>					
<b>43-5011</b>	U.S.	14.63	13.73	10.18 - 18.17	30,440
	Montana	12.16	12.06	10.81 - 13.31	25,288
	Yellowstone County MSA	17.88	18.42	16.04 - 20.24	37,196
<b>Couriers and Messengers</b>					
<b>43-5021</b>	U.S.	9.63	8.96	7.25 - 11.14	20,030
	Montana	7.90	7.07	6.17 - 8.61	16,431
	Yellowstone County MSA	8.08	6.95	6.14 - 8.67	16,803
	Missoula County MSA	8.15	8.12	7.48 - 8.78	16,957
<b>Police, Fire and Ambulance Dispatchers</b>					
<b>43-5031</b>	U.S.	12.83	12.38	9.78 - 15.60	26,680
	Montana	10.50	10.20	8.39 - 12.49	21,847
<b>Dispatchers, Except Police, Fire and Ambulance</b>					
<b>43-5032</b>	U.S.	14.62	13.66	10.38 - 17.99	30,410
	Montana	11.88	10.64	9.30 - 13.55	24,703
	Yellowstone County MSA	10.77	10.44	9.54 - 11.49	22,401
	Cascade County MSA	11.71	10.71	9.63 - 13.05	24,360
	Missoula County MSA	12.72	12.14	9.96 - 15.28	26,454
<b>Meter Readers, Utilities</b>					
<b>43-5041</b>	U.S.	14.02	13.32	10.11 - 17.29	29,150
	Montana	13.12	13.20	11.68 - 15.39	27,281
<b>Postal Service Clerks</b>					
<b>43-5051</b>	U.S.	18.31	18.75	17.38 - 20.13	38,080
	Montana	18.25	18.69	17.29 - 20.10	37,957
<b>Postal Service Mail Carriers</b>					
<b>43-5052</b>	U.S.	17.71	18.47	16.16 - 20.16	36,830
	Montana	17.02	18.09	14.48 - 19.89	35,393

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<b>Postal Service Mail Sorters, Processors and Processing Machine Operators</b>					
<b>43-5053</b>	U.S.	14.81	15.42	10.85 - 18.90	30,810
	Montana	11.89	10.69	8.85 - 15.11	24,734
<b>Production, Planning and Expediting Clerks</b>					
<b>43-5061</b>	U.S.	15.64	14.71	11.06 - 19.42	32,520
	Montana	14.09	12.90	9.89 - 17.25	29,306
	Yellowstone County MSA	16.16	13.31	10.93 - 19.85	33,618
	Cascade County MSA	13.39	12.32	8.80 - 18.04	27,858
	Missoula County MSA	14.19	13.31	11.21 - 17.32	29,520
<b>Shipping, Receiving and Traffic Clerks</b>					
<b>43-5071</b>	U.S.	11.22	10.52	8.49 - 13.22	23,340
	Montana	9.41	8.93	7.63 - 10.54	19,568
	Yellowstone County MSA	9.65	9.21	7.71 - 10.76	20,065
	Cascade County MSA	9.81	9.41	8.01 - 10.73	20,396
	Missoula County MSA	9.53	8.77	7.70 - 10.51	19,828
<b>Stock Clerks and Order Fillers</b>					
<b>43-5081</b>	U.S.	9.93	8.75	7.15 - 11.69	20,650
	Montana	9.70	8.30	6.67 - 11.40	20,185
	Yellowstone County MSA	9.86	8.88	7.18 - 11.95	20,507
	Cascade County MSA	8.73	7.32	6.13 - 10.68	18,149
	Missoula County MSA	9.13	7.81	6.43 - 10.07	18,995
<b>Weighers, Measurers, Checkers and Samplers, Recordkeeping</b>					
<b>43-5111</b>	U.S.	12.62	11.36	8.94 - 15.57	26,250
	Montana	8.59	8.42	7.59 - 9.62	17,875
	Yellowstone County MSA	8.88	8.25	7.52 - 9.87	18,465
	Missoula County MSA	8.52	8.38	7.57 - 9.56	17,714
<b>Executive Secretaries and Administrative Assistants</b>					
<b>43-6011</b>	U.S.	15.63	14.95	12.00 - 18.45	32,520
	Montana	11.86	10.67	8.72 - 14.17	24,674
	Yellowstone County MSA	11.80	10.73	9.15 - 13.68	24,553
	Cascade County MSA	10.27	9.96	8.18 - 12.20	21,356
	Missoula County MSA	11.03	10.54	8.41 - 12.85	22,949
<b>Legal Secretaries</b>					
<b>43-6012</b>	U.S.	17.00	16.70	13.29 - 20.44	35,370
	Montana	10.43	9.09	7.68 - 12.67	21,691
	Yellowstone County MSA	15.09	15.17	13.74 - 16.68	31,392
	Cascade County MSA	10.78	11.17	9.03 - 12.50	22,412

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<b>Medical Secretaries</b>					
<b>43-6013</b>	U.S.	11.76	11.26	9.39 - 13.52	24,460
	Montana	9.84	9.60	8.44 - 10.73	20,471
	Yellowstone County MSA	10.68	10.18	9.14 - 12.09	22,210
	Cascade County MSA	10.45	10.30	9.31 - 11.91	21,736
	Missoula County MSA	9.44	9.08	7.91 - 10.40	19,632
<b>Secretaries, Except Legal, Medical and Executive</b>					
<b>43-6014</b>	U.S.	11.98	11.47	9.14 - 14.38	24,910
	Montana	9.33	9.15	7.52 - 10.57	19,402
	Yellowstone County MSA	9.54	9.47	7.80 - 10.87	19,842
	Cascade County MSA	9.18	9.26	7.20 - 10.72	19,098
	Missoula County MSA	9.30	9.24	8.05 - 10.41	19,345
<b>Computer Operators</b>					
<b>43-9011</b>	U.S.	14.15	13.30	10.23 - 16.98	29,430
	Montana	10.73	10.26	7.91 - 12.98	22,328
	Yellowstone County MSA	10.18	10.01	8.55 - 11.81	21,184
	Cascade County MSA	10.26	10.27	8.40 - 12.31	21,332
	Missoula County MSA	12.67	12.41	9.81 - 15.72	26,360
<b>Data Entry Keyers</b>					
<b>43-9021</b>	U.S.	10.66	10.24	8.58 - 12.41	22,170
	Montana	9.45	8.78	7.72 - 10.61	19,652
	Yellowstone County MSA	9.55	8.22	7.45 - 10.21	19,856
	Cascade County MSA	8.42	7.98	7.08 - 9.32	17,520
	Missoula County MSA	9.92	9.29	8.00 - 11.53	20,635
<b>Word Processors and Typists</b>					
<b>43-9022</b>	U.S.	12.22	11.88	9.65 - 14.18	25,420
	Montana	10.96	10.60	8.75 - 13.00	22,789
	Yellowstone County MSA	11.71	11.29	9.31 - 14.79	24,354
	Cascade County MSA	9.56	9.11	7.96 - 11.00	19,875
	Missoula County MSA	11.43	10.94	9.19 - 13.33	23,766
<b>Desktop Publishers</b>					
<b>43-9031</b>	U.S.	15.72	14.71	11.00 - 19.33	32,700
	Montana	9.79	9.31	7.99 - 11.79	20,354
<b>Insurance Claims and Policy Processing Clerks</b>					
<b>43-9041</b>	U.S.	14.72	13.47	10.82 - 16.91	30,620
	Montana	11.27	11.36	9.46 - 12.89	23,446
	Cascade County MSA	10.46	10.22	8.98 - 12.01	21,751
	Missoula County MSA	10.91	10.24	8.89 - 13.41	22,702

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<b>Mail Clerks and Mail Machine Operators, Except Postal Service</b>					
<b>43-9051</b>	U.S.	9.96	9.54	7.84 - 11.60	20,710
	Montana	8.49	7.71	6.84 - 8.67	17,664
	Yellowstone County MSA	7.16	6.90	6.14 - 8.15	14,891
	Cascade County MSA	7.87	7.80	7.03 - 8.69	16,372
	Missoula County MSA	8.93	8.35	7.62 - 9.76	18,574
<b>Office Clerks, General</b>					
<b>43-9061</b>	U.S.	10.72	10.16	8.03 - 12.82	22,290
	Montana	9.52	8.84	7.36 - 10.79	19,798
	Yellowstone County MSA	10.19	9.42	7.86 - 11.05	21,196
	Cascade County MSA	9.13	8.88	7.41 - 10.54	18,986
	Missoula County MSA	9.51	9.13	7.76 - 10.83	19,784
<b>Office Machine Operators, Except Computer</b>					
<b>43-9071</b>	U.S.	10.77	10.00	8.16 - 12.53	22,400
	Montana	8.78	8.69	7.14 - 9.99	18,266
<b>Proofreaders and Copy Markers</b>					
<b>43-9081</b>	U.S.	11.89	10.76	8.52 - 14.31	24,730
	Montana	8.22	8.24	7.31 - 9.43	17,094
<b>Statistical Assistants</b>					
<b>43-9111</b>	U.S.	14.22	13.40	10.39 - 17.28	29,570
	Montana	12.18	11.87	9.93 - 13.83	25,340
<b>Farming, Fishing and Forestry Occupations</b>					
<b>First-Line Supervisors/Managers of Farming, Fishing and Forestry Workers</b>					
<b>45-1011</b>	U.S.	16.72	15.43	11.55 - 20.38	34,780
	Montana	14.03	12.48	10.59 - 18.39	29,181
	Cascade County MSA	14.80	12.71	11.32 - 15.36	30,776
<b>Graders and Sorters, Agricultural Products</b>					
<b>45-2041</b>	U.S.	8.00	7.11	6.34 - 8.78	16,640
	Montana	8.86	8.61	7.42 - 10.06	18,436
<b>Agricultural Equipment Operators</b>					
<b>45-2091</b>	U.S.	8.66	7.68	6.34 - 10.28	18,020
	Montana	8.97	9.31	7.84 - 10.27	18,662
<b>Farmworkers and Laborers, Crop, Nursery and Greenhouse</b>					
<b>45-2092</b>	U.S.	7.21	6.64	6.21 - 7.67	15,000
	Montana	9.04	7.88	7.12 - 10.74	18,810
	Yellowstone County MSA	6.17	6.17	5.68 - 6.66	12,827

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<b>Farmworkers, Farm and Ranch Animals</b>					
<b>45-2093</b>	U.S.	8.18	7.61	6.47 - 9.44	17,010
	Montana	7.34	6.50	5.84 - 8.29	15,272
	Yellowstone County MSA	7.48	6.55	5.87 - 8.50	15,549
<b>Fallers</b>					
<b>45-4021</b>	U.S.	14.59	12.33	8.82 - 17.14	30,350
	Montana	20.96	16.67	14.70 - 27.13	43,590
<b>Logging Equipment Operators</b>					
<b>45-4022</b>	U.S.	12.47	12.07	9.50 - 15.21	25,930
	Montana	14.76	14.93	13.35 - 16.33	30,693
	Missoula County MSA	14.78	15.13	14.02 - 16.24	30,735
<b>Log Graders and Scalers</b>					
<b>45-4023</b>	U.S.	13.81	13.07	10.67 - 16.38	28,730
	Montana	13.65	13.14	11.70 - 15.49	28,401
<b>Construction and Extraction Occupations</b>					
<b>First-Line Supervisors/Managers of Construction Trades and Extraction Workers</b>					
<b>47-1011</b>	U.S.	22.95	21.53	17.03 - 27.25	47,740
	Montana	18.64	18.13	14.29 - 22.02	38,771
	Yellowstone County MSA	19.59	19.26	16.28 - 23.22	40,745
	Cascade County MSA	21.09	22.04	16.89 - 25.01	43,872
	Missoula County MSA	24.44	22.83	13.91 - 31.77	50,843
<b>Boilermakers</b>					
<b>47-2011</b>	U.S.	18.26	17.80	14.06 - 23.19	37,980
	Montana	21.31	21.91	19.33 - 24.41	44,324
<b>Brickmasons and Blockmasons</b>					
<b>47-2021</b>	U.S.	19.78	19.37	15.00 - 24.48	41,140
	Montana	20.32	21.36	16.60 - 25.37	42,271
<b>Stonemasons</b>					
<b>47-2022</b>	U.S.	15.57	14.98	10.78 - 19.24	32,380
	Montana	18.33	19.32	17.82 - 20.82	38,130
<b>Carpenters</b>					
<b>47-2031</b>	U.S.	16.88	15.69	11.99 - 20.86	35,100
	Montana	13.47	13.45	11.73 - 15.61	28,023
	Yellowstone County MSA	12.97	12.73	11.31 - 14.99	26,969
	Cascade County MSA	14.05	15.03	12.66 - 16.49	29,232
	Missoula County MSA	13.31	14.62	9.57 - 16.22	27,679

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<b>Carpet Installers 47-2041</b>	U.S.	15.88	14.46	10.41 - 20.47	33,030
	Montana	23.34	24.22	22.71 - 25.74	48,553
<b>Tile and Marble Setters 47-2044</b>	U.S.	17.58	16.49	12.54 - 21.93	36,580
	Montana	15.34	13.84	12.51 - 18.73	31,916
<b>Cement Masons and Concrete Finishers 47-2051</b>	U.S.	14.92	13.50	10.55 - 18.41	31,020
	Montana	13.28	12.93	11.37 - 15.67	27,630
	Yellowstone County MSA	12.50	12.38	11.01 - 13.75	25,999
	Missoula County MSA	13.34	12.60	11.69 - 13.62	27,750
<b>Construction Laborers 47-2061</b>	U.S.	12.95	11.15	8.79 - 16.23	26,940
	Montana	12.00	11.02	9.23 - 14.77	24,953
	Yellowstone County MSA	14.13	14.74	10.28 - 17.28	29,383
	Cascade County MSA	11.07	10.41	8.12 - 14.40	23,017
	Missoula County MSA	12.73	13.89	9.81 - 15.55	26,475
<b>Paving, Surfacing and Tamping Equipment Operators 47-2071</b>	U.S.	14.47	12.88	10.04 - 17.57	30,090
	Montana	13.49	13.53	11.34 - 16.36	28,050
<b>Operating Engineers and Other Construction Equipment Operators 47-2073</b>	U.S.	17.39	15.99	12.21 - 21.68	36,170
	Montana	15.22	14.99	11.94 - 18.41	31,649
	Yellowstone County MSA	17.67	17.03	15.42 - 19.75	36,757
	Cascade County MSA	17.66	16.34	14.00 - 19.61	36,725
<b>Drywall and Ceiling Tile Installers 47-2081</b>	U.S.	17.11	15.80	12.27 - 20.81	35,580
	Montana	15.50	14.83	12.38 - 18.66	32,240
	Yellowstone County MSA	17.14	16.17	14.74 - 19.31	35,649
<b>Tapers 47-2082</b>	U.S.	18.60	17.81	13.99 - 23.34	38,680
	Montana	15.52	15.65	14.02 - 17.28	32,282
<b>Electricians 47-2111</b>	U.S.	20.29	19.29	14.49 - 25.41	42,210
	Montana	20.12	20.74	17.90 - 23.92	41,840
	Yellowstone County MSA	19.67	20.46	18.18 - 23.21	40,924
	Cascade County MSA	18.35	18.96	17.55 - 20.37	38,176
	Missoula County MSA	22.60	23.65	21.85 - 25.45	47,002

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<b>Glaziers</b>					
<b>47-2121</b>	U.S.	15.56	14.32	10.88 - 19.35	32,360
	Montana	12.81	12.51	11.17 - 13.97	26,637
	Yellowstone County MSA	15.22	15.11	13.65 - 16.60	31,666
<b>Painters, Construction and Maintenance</b>					
<b>47-2141</b>	U.S.	14.24	13.10	10.36 - 16.81	29,610
	Montana	13.25	13.84	10.46 - 16.06	27,550
	Yellowstone County MSA	12.97	10.10	8.00 - 18.86	26,976
	Cascade County MSA	14.98	15.09	13.52 - 16.69	31,149
	Missoula County MSA	13.01	12.86	10.27 - 15.63	27,064
<b>Pipelayers</b>					
<b>47-2151</b>	U.S.	14.53	13.20	10.17 - 17.71	30,220
	Montana	15.28	14.77	12.48 - 16.97	31,783
<b>Plumbers, Pipefitters and Steamfitters</b>					
<b>47-2152</b>	U.S.	19.31	18.19	14.00 - 24.24	40,170
	Montana	21.49	22.74	18.46 - 25.45	44,695
	Yellowstone County MSA	24.50	25.04	22.42 - 27.66	50,958
	Cascade County MSA	16.41	17.25	12.60 - 19.98	34,128
	Missoula County MSA	21.59	23.28	20.49 - 25.28	44,900
<b>Reinforcing Iron and Rebar Workers</b>					
<b>47-2171</b>	U.S.	18.17	16.78	12.57 - 23.64	37,800
	Montana	20.69	20.35	18.98 - 21.73	43,033
<b>Roofers</b>					
<b>47-2181</b>	U.S.	15.22	13.95	10.72 - 18.86	31,670
	Montana	15.41	15.57	13.61 - 17.75	32,053
	Yellowstone County MSA	15.56	15.68	14.27 - 17.11	32,366
<b>Sheet Metal Workers</b>					
<b>47-2211</b>	U.S.	16.85	15.31	11.32 - 21.36	35,050
	Montana	16.65	17.35	11.09 - 21.35	34,626
	Cascade County MSA	18.07	19.17	15.85 - 21.17	37,589
	Missoula County MSA	18.15	20.03	11.04 - 23.63	37,761
<b>Helpers, Brickmasons, Blockmasons, Stonemasons and Tile and Marble Setters</b>					
<b>47-3011</b>	U.S.	12.39	10.95	9.16 - 14.48	25,780
	Montana	13.83	14.78	12.83 - 16.11	28,757
<b>Helpers, Carpenters</b>					
<b>47-3012</b>	U.S.	10.37	9.91	8.11 - 12.09	21,570
	Montana	10.67	10.21	9.10 - 12.23	22,198

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Helpers, Electricians</b>					
<b>47-3013</b>	U.S.	10.93	10.27	8.65 - 12.71	22,740
	Montana	11.21	11.38	9.91 - 12.57	23,307
<b>Helpers, Painters, Paperhangers, Plasterers and Stucco Masons</b>					
<b>47-3014</b>	U.S.	10.28	9.28	7.62 - 11.84	21,380
	Montana	8.58	9.43	6.60 - 10.31	17,855
<b>Helpers, Pipelayers, Plumbers, Pipefitters and Steamfitters</b>					
<b>47-3015</b>	U.S.	10.79	10.21	8.60 - 12.52	22,450
	Montana	10.95	10.66	9.58 - 12.31	22,782
<b>Construction and Building Inspectors</b>					
<b>47-4011</b>	U.S.	19.10	18.63	14.73 - 23.01	39,730
	Montana	16.42	16.38	13.79 - 19.47	34,148
	Cascade County MSA	15.36	15.07	13.12 - 16.86	31,946
<b>Fence Erectors</b>					
<b>47-4031</b>	U.S.	12.02	10.53	8.60 - 14.53	25,010
	Montana	10.63	10.05	8.66 - 13.43	22,104
<b>Hazardous Materials Removal Workers</b>					
<b>47-4041</b>	U.S.	15.21	13.71	11.34 - 18.56	31,630
	Montana	14.68	13.47	11.85 - 16.66	30,542
<b>Highway Maintenance Workers</b>					
<b>47-4051</b>	U.S.	13.21	12.82	9.93 - 16.16	27,480
	Montana	12.67	12.40	11.02 - 13.97	26,353
<b>Rail-Track Laying and Maintenance Equipment Operators</b>					
<b>47-4061</b>	U.S.	14.84	14.93	11.65 - 17.33	30,870
	Montana	11.40	10.67	8.76 - 13.61	23,721
<b>Service Unit Operators, Oil, Gas and Mining</b>					
<b>47-5013</b>	U.S.	13.34	12.12	9.97 - 15.27	27,750
	Montana	14.05	14.33	12.50 - 15.97	29,225
<b>Earth Drillers, Except Oil and Gas</b>					
<b>47-5021</b>	U.S.	15.39	14.68	11.59 - 18.30	32,010
	Montana	15.10	15.25	13.57 - 16.81	31,413
<b>Explosives Workers, Ordnance Handling Experts and Blasters</b>					
<b>47-5031</b>	U.S.	16.15	15.84	13.18 - 18.99	33,590
	Montana	17.57	17.35	15.00 - 19.81	36,540

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Rock Splitters, Quarry</b>					
<b>47-5051</b>	U.S.	13.10	12.43	10.09 - 15.14	27,250
	Montana	9.37	8.18	7.41 - 10.86	19,485
<b>Roustabouts, Oil and Gas</b>					
<b>47-5071</b>	U.S.	10.88	9.83	7.85 - 13.19	22,640
	Montana	12.51	12.33	9.72 - 14.67	26,027
<b>Helpers, Extraction Workers</b>					
<b>47-5081</b>	U.S.	11.72	10.99	9.03 - 13.71	24,380
	Montana	11.02	10.98	8.73 - 13.08	22,914
<b>Installation, Maintenance and Repair Occupations</b>					
<b>First-Line Supervisors/Managers of Mechanics, Installers and Repairers</b>					
<b>49-1011</b>	U.S.	22.39	21.27	16.48 - 27.05	46,560
	Montana	19.91	19.70	15.41 - 24.62	41,411
	Yellowstone County MSA	20.37	18.60	15.50 - 24.31	42,376
	Cascade County MSA	19.63	19.04	15.84 - 23.41	40,836
	Missoula County MSA	20.31	19.07	16.20 - 22.86	42,245
<b>Computer, Automated Teller and Office Machine Repairers</b>					
<b>49-2011</b>	U.S.	15.80	15.08	11.80 - 19.20	32,860
	Montana	14.54	14.07	11.18 - 17.35	30,249
	Yellowstone County MSA	15.66	14.76	11.88 - 19.45	32,574
	Cascade County MSA	11.85	11.44	8.54 - 14.47	24,643
	Missoula County MSA	13.27	13.00	11.15 - 15.54	27,602
<b>Telecommunications Equipment Installers and Repairers, Except Line Installers</b>					
<b>49-2022</b>	U.S.	20.44	21.17	16.55 - 24.99	42,520
	Montana	17.93	19.55	11.31 - 24.06	37,299
	Yellowstone County MSA	19.40	19.52	15.88 - 23.00	40,350
	Cascade County MSA	19.44	19.84	18.31 - 21.37	40,439
	Missoula County MSA	22.92	24.19	21.45 - 26.25	47,681
<b>Electric Motor, Power Tool and Related Repairers</b>					
<b>49-2092</b>	U.S.	16.38	15.80	11.91 - 20.04	34,070
	Montana	19.40	21.54	13.95 - 24.87	40,355
	Yellowstone County MSA	14.50	10.42	9.45 - 16.82	30,168
<b>Electrical and Electronics Installers and Repairers, Transportation Equipment</b>					
<b>49-2093</b>	U.S.	17.16	16.93	12.25 - 21.54	35,690
	Montana	17.50	18.33	15.60 - 20.61	36,408

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## 2000 Montana Occupational Wage Survey

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<b>Electrical and Electronics Repairers, Commercial and Industrial Equipment</b>					
<b>49-2094</b>	U.S.	17.88	17.75	13.92 - 21.32	37,190
	Montana	18.79	17.66	13.53 - 23.64	39,091
	Yellowstone County MSA	18.96	17.04	12.36 - 25.99	39,436
	Cascade County MSA	17.91	16.86	13.89 - 22.55	37,251
	Missoula County MSA	17.98	17.94	15.05 - 20.10	37,399
<b>Electronic Home Entertainment Equipment Installers and Repairers</b>					
<b>49-2097</b>	U.S.	13.55	12.72	9.90 - 16.63	28,190
	Montana	13.45	12.78	11.65 - 13.95	27,973
	Yellowstone County MSA	13.04	12.61	10.84 - 15.56	27,116
<b>Security and Fire Alarm Systems Installers</b>					
<b>49-2098</b>	U.S.	15.92	14.66	11.57 - 18.83	33,100
	Montana	16.42	15.63	12.12 - 19.91	34,158
<b>Aircraft Mechanics and Service Technicians</b>					
<b>49-3011</b>	U.S.	19.49	19.50	15.65 - 23.65	40,550
	Montana	15.88	15.34	12.22 - 19.43	33,034
	Yellowstone County MSA	14.42	13.38	11.42 - 17.01	29,990
	Cascade County MSA	18.88	19.65	17.56 - 22.09	39,266
<b>Automotive Body and Related Repairers</b>					
<b>49-3021</b>	U.S.	16.21	15.00	11.12 - 20.02	33,710
	Montana	12.61	12.05	9.62 - 15.47	26,234
	Yellowstone County MSA	14.65	14.10	9.78 - 19.04	30,467
	Cascade County MSA	12.94	11.56	9.56 - 15.64	26,915
<b>Automotive Glass Installers and Repairers</b>					
<b>49-3022</b>	U.S.	13.03	12.46	9.65 - 15.86	27,090
	Montana	10.35	9.24	7.99 - 12.76	21,536
	Yellowstone County MSA	12.55	12.55	10.85 - 14.57	26,102
<b>Automotive Service Technicians and Mechanics</b>					
<b>49-3023</b>	U.S.	14.80	13.70	9.86 - 18.67	30,780
	Montana	12.73	12.51	9.34 - 15.68	26,482
	Yellowstone County MSA	12.30	12.29	9.26 - 15.34	25,579
	Cascade County MSA	16.76	16.18	10.71 - 23.49	34,856
	Missoula County MSA	12.98	12.49	11.34 - 14.09	26,996
<b>Bus and Truck Mechanics and Diesel Engine Specialists</b>					
<b>49-3031</b>	U.S.	15.97	15.55	12.33 - 19.30	33,210
	Montana	14.21	14.19	10.84 - 16.99	29,564
	Yellowstone County MSA	15.02	15.00	12.50 - 17.58	31,242
	Cascade County MSA	15.31	15.55	13.12 - 17.73	31,850
	Missoula County MSA	14.66	14.98	12.35 - 16.87	30,485

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Farm Equipment Mechanics</b>					
<b>49-3041</b>	U.S.	12.83	12.38	9.99 - 15.29	26,690
	Montana	12.31	12.19	10.28 - 13.92	25,612
	Cascade County MSA	11.63	12.11	9.77 - 13.52	24,196
<b>Mobile Heavy Equipment Mechanics, Except Engines</b>					
<b>49-3042</b>	U.S.	16.73	16.32	13.32 - 19.86	34,790
	Montana	16.03	15.93	13.26 - 18.98	33,338
	Yellowstone County MSA	15.38	15.58	13.62 - 17.49	31,998
	Cascade County MSA	16.09	16.10	13.68 - 18.31	33,469
	Missoula County MSA	16.69	16.41	15.12 - 17.63	34,710
<b>Motorboat Mechanics</b>					
<b>49-3051</b>	U.S.	13.49	12.82	9.98 - 16.19	28,060
	Montana	12.34	14.06	8.49 - 15.83	25,670
<b>Motorcycle Mechanics</b>					
<b>49-3052</b>	U.S.	12.90	12.07	9.45 - 15.62	26,820
	Montana	10.07	10.41	8.02 - 12.09	20,949
<b>Outdoor Power Equipment and Other Small Engine Mechanics</b>					
<b>49-3053</b>	U.S.	11.86	11.43	9.10 - 14.12	24,670
	Montana	10.06	9.56	8.11 - 11.09	20,915
	Missoula County MSA	13.77	14.11	11.69 - 15.86	28,637
<b>Bicycle Repairers</b>					
<b>49-3091</b>	U.S.	9.04	8.67	7.22 - 10.58	18,810
	Montana	8.13	8.00	6.53 - 9.57	16,914
<b>Recreational Vehicle Service Technicians</b>					
<b>49-3092</b>	U.S.	12.79	12.20	9.66 - 15.29	26,610
	Montana	12.39	12.07	9.91 - 14.68	25,761
<b>Tire Repairers and Changers</b>					
<b>49-3093</b>	U.S.	9.66	9.02	7.64 - 10.76	20,100
	Montana	9.37	8.33	7.42 - 11.10	19,492
	Yellowstone County MSA	8.80	7.96	7.38 - 8.70	18,311
	Cascade County MSA	7.80	7.81	7.04 - 8.62	16,217
	Missoula County MSA	9.53	8.63	7.41 - 10.81	19,825
<b>Mechanical Door Repairers</b>					
<b>49-9011</b>	U.S.	14.41	13.77	10.71 - 17.15	29,980
	Montana	11.53	11.40	9.66 - 13.45	23,983
<b>Control and Valve Installers and Repairers, Except Mechanical Door</b>					
<b>49-9012</b>	U.S.	19.66	19.87	14.74 - 24.54	40,890
	Montana	10.43	8.90	5.98 - 13.05	21,692

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Heating, Air Conditioning and Refrigeration Mechanics and Installers</b>					
<b>49-9021</b>	U.S.	16.43	15.76	12.25 - 19.92	34,180
	Montana	16.63	15.98	12.18 - 21.34	34,588
	Yellowstone County MSA	19.07	21.40	12.84 - 24.19	39,667
	Cascade County MSA	16.81	16.95	12.43 - 20.79	34,958
<b>Home Appliance Repairers</b>					
<b>49-9031</b>	U.S.	14.80	13.87	10.50 - 18.29	30,790
	Montana	12.35	11.93	9.60 - 14.61	25,689
	Yellowstone County MSA	13.43	12.76	9.41 - 16.18	27,932
	Cascade County MSA	11.97	11.54	9.80 - 14.38	24,902
	Missoula County MSA	11.44	11.09	9.43 - 12.96	23,803
<b>Industrial Machinery Mechanics</b>					
<b>49-9041</b>	U.S.	18.02	17.30	13.73 - 21.93	37,490
	Montana	17.42	15.87	13.87 - 19.82	36,241
	Yellowstone County MSA	21.62	19.67	16.01 - 29.02	44,960
	Missoula County MSA	15.46	15.43	14.45 - 16.41	32,147
<b>Maintenance and Repair Workers, General</b>					
<b>49-9042</b>	U.S.	14.14	13.39	10.05 - 17.47	29,420
	Montana	11.60	10.94	8.31 - 14.19	24,133
	Yellowstone County MSA	12.96	11.68	9.59 - 15.54	26,955
	Cascade County MSA	10.97	10.42	8.66 - 12.79	22,821
	Missoula County MSA	12.06	11.88	9.78 - 13.81	25,090
<b>Maintenance Workers, Machinery</b>					
<b>49-9043</b>	U.S.	15.47	14.89	11.54 - 18.79	32,170
	Montana	11.61	10.72	9.03 - 13.62	24,145
	Yellowstone County MSA	10.55	9.16	7.68 - 12.90	21,937
<b>Millwrights</b>					
<b>49-9044</b>	U.S.	19.42	19.33	15.19 - 23.98	40,400
	Montana	15.47	16.42	12.13 - 19.24	32,174
<b>Electrical Power-Line Installers and Repairers</b>					
<b>49-9051</b>	U.S.	21.39	22.01	16.99 - 26.09	44,490
	Montana	22.28	23.28	20.20 - 25.47	46,348
<b>Telecommunications Line Installers and Repairers</b>					
<b>49-9052</b>	U.S.	18.29	18.32	12.82 - 23.82	38,050
	Montana	16.40	16.54	10.19 - 22.05	34,103
	Cascade County MSA	17.20	18.44	13.34 - 20.15	35,781
	Missoula County MSA	24.98	25.31	23.82 - 26.81	51,957

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<b>Medical Equipment Repairers</b>					
<b>49-9062</b>	U.S.	18.02	16.99	13.48 - 21.66	37,470
	Montana	16.17	16.13	13.62 - 18.94	33,636
<b>Coin, Vending and Amusement Machine Servicers and Repairers</b>					
<b>49-9091</b>	U.S.	12.74	12.33	9.18 - 15.78	26,510
	Montana	11.72	12.03	9.19 - 13.95	24,386
	Cascade County MSA	13.07	14.08	9.69 - 16.21	27,190
	Missoula County MSA	12.46	11.81	10.21 - 14.29	25,913
<b>Manufactured Building and Mobile Home Installers</b>					
<b>49-9095</b>	U.S.	11.06	10.43	8.76 - 12.80	23,010
	Montana	11.69	11.75	10.76 - 12.72	24,306
<b>Helpers, Installation, Maintenance and Repair Workers</b>					
<b>49-9098</b>	U.S.	10.88	9.98	7.83 - 13.10	22,620
	Montana	12.42	10.24	8.29 - 16.77	25,838
	Yellowstone County MSA	10.23	7.91	6.06 - 10.64	21,272
	Cascade County MSA	7.54	6.92	6.04 - 9.09	15,687
	Missoula County MSA	15.94	15.67	11.45 - 20.34	33,147
<b>Production Occupations</b>					
<b>First-Line Supervisors/Managers of Production and Operating Workers</b>					
<b>51-1011</b>	U.S.	20.68	19.39	14.78 - 25.32	43,020
	Montana	16.84	15.37	11.52 - 21.18	35,023
	Yellowstone County MSA	16.72	15.23	8.09 - 21.34	34,774
	Cascade County MSA	19.30	16.60	14.07 - 22.16	40,146
	Missoula County MSA	17.76	16.94	13.52 - 22.47	36,947
<b>Coil Winders, Tapers and Finishers</b>					
<b>51-2021</b>	U.S.	10.55	9.77	8.00 - 12.41	21,940
	Montana	7.43	7.35	6.28 - 8.34	15,452
<b>Electrical and Electronic Equipment Assemblers</b>					
<b>51-2022</b>	U.S.	11.03	10.31	8.44 - 12.97	22,950
	Montana	11.40	10.60	8.97 - 13.14	23,716
<b>Structural Metal Fabricators and Fitters</b>					
<b>51-2041</b>	U.S.	13.70	13.11	10.53 - 16.14	28,490
	Montana	12.70	12.43	10.65 - 13.96	26,410
	Yellowstone County MSA	13.18	12.67	10.73 - 14.88	27,417

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<b>Team Assemblers</b>					
<b>51-2092</b>	U.S.	11.29	10.32	8.39 - 13.11	23,490
	Montana	10.28	10.59	8.03 - 12.39	21,387
	Yellowstone County MSA	9.49	9.04	7.58 - 11.37	19,731
	Missoula County MSA	9.33	8.71	7.47 - 11.46	19,408
<b>Bakers</b>					
<b>51-3011</b>	U.S.	10.12	9.48	7.51 - 12.30	21,050
	Montana	9.35	8.60	7.05 - 11.07	19,456
	Yellowstone County MSA	10.87	10.33	7.54 - 14.64	22,607
	Missoula County MSA	7.73	7.16	6.05 - 9.03	16,077
<b>Butchers and Meat Cutters</b>					
<b>51-3021</b>	U.S.	12.35	11.60	8.74 - 15.59	25,690
	Montana	11.96	11.94	9.43 - 13.76	24,883
	Yellowstone County MSA	13.66	13.54	10.19 - 17.31	28,408
	Missoula County MSA	13.78	12.75	11.78 - 14.58	28,672
<b>Meat, Poultry and Fish Cutters and Trimmers</b>					
<b>51-3022</b>	U.S.	8.51	8.06	7.17 - 9.57	17,710
	Montana	11.01	11.13	9.80 - 12.52	22,897
	Yellowstone County MSA	11.16	11.47	9.55 - 12.81	23,206
<b>Slaughterers and Meat Packers</b>					
<b>51-3023</b>	U.S.	9.29	9.33	7.99 - 10.47	19,330
	Montana	9.90	9.92	8.88 - 10.96	20,595
<b>Food Batchmakers</b>					
<b>51-3092</b>	U.S.	10.71	10.09	7.68 - 13.27	22,280
	Montana	6.39	6.19	5.68 - 6.70	13,293
<b>Food Cooking Machine Operators and Tenders</b>					
<b>51-3093</b>	U.S.	10.49	9.92	7.69 - 12.86	21,830
	Montana	9.72	8.24	6.81 - 12.99	20,227
<b>Forging Machine Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4022</b>	U.S.	13.30	12.11	9.29 - 16.01	27,660
	Montana	10.39	10.46	8.16 - 12.65	21,606
<b>Cutting, Punching and Press Machine Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4031</b>	U.S.	11.67	11.03	8.91 - 13.64	24,280
	Montana	11.62	11.02	8.90 - 14.04	24,178
<b>Grinding, Lapping, Polishing and Buffing Machine Tool Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4033</b>	U.S.	12.42	11.71	9.32 - 14.83	25,820
	Montana	9.71	9.86	8.70 - 11.28	20,206

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Milling and Planing Machine Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4035</b>	U.S.	14.00	13.25	10.38 - 16.73	29,130
	Montana	10.54	10.04	9.09 - 11.01	21,925
<b>Machinists</b>					
<b>51-4041</b>	U.S.	15.20	14.78	11.43 - 18.39	31,610
	Montana	14.92	14.56	10.89 - 18.38	31,039
	Yellowstone County MSA	16.04	16.37	12.50 - 19.73	33,369
	Missoula County MSA	13.31	13.28	10.07 - 16.99	27,677
<b>Metal-Refining Furnace Operators and Tenders</b>					
<b>51-4051</b>	U.S.	14.12	13.47	11.16 - 16.61	29,370
	Montana	11.78	11.05	9.21 - 14.70	24,497
<b>Pourers and Casters, Metal</b>					
<b>51-4052</b>	U.S.	13.38	12.67	10.54 - 15.80	27,840
	Montana	12.13	11.72	9.68 - 14.36	25,239
<b>Molding, Coremaking and Casting Machine Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4072</b>	U.S.	11.36	10.40	8.37 - 13.16	23,630
	Montana	8.16	7.94	7.32 - 8.72	16,978
<b>Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic</b>					
<b>51-4081</b>	U.S.	14.11	12.96	10.01 - 17.07	29,350
	Montana	10.36	8.46	7.39 - 11.60	21,545
	Missoula County MSA	7.88	7.89	7.12 - 8.70	16,399
<b>Welders, Cutters, Solderers and Brazers</b>					
<b>51-4121</b>	U.S.	13.98	13.13	10.74 - 16.37	29,080
	Montana	14.57	14.22	11.43 - 17.97	30,314
	Yellowstone County MSA	12.04	11.48	9.17 - 14.55	25,053
	Cascade County MSA	12.69	13.11	9.85 - 15.44	26,392
	Missoula County MSA	11.90	11.60	9.52 - 13.65	24,762
<b>Tool Grinders, Filers and Sharpeners</b>					
<b>51-4194</b>	U.S.	14.22	13.22	10.17 - 17.28	29,580
	Montana	14.13	13.76	11.59 - 17.19	29,389
<b>Bindery Workers</b>					
<b>51-5011</b>	U.S.	11.14	10.05	7.88 - 13.27	23,180
	Montana	8.73	8.49	7.56 - 9.72	18,164
<b>Job Printers</b>					
<b>51-5021</b>	U.S.	14.37	13.61	10.00 - 17.67	29,880
	Montana	12.44	11.03	9.37 - 16.04	25,871

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Prepress Technicians and Workers</b>					
<b>51-5022</b>	U.S.	15.31	14.57	10.70 - 19.12	31,840
	Montana	13.05	12.14	9.70 - 15.99	27,154
<b>Printing Machine Operators</b>					
<b>51-5023</b>	U.S.	14.47	13.57	10.38 - 17.80	30,090
	Montana	10.98	11.31	8.56 - 12.94	22,829
	Yellowstone County MSA	12.57	12.31	9.63 - 15.56	26,146
	Cascade County MSA	9.19	8.54	7.60 - 10.66	19,107
	Missoula County MSA	10.07	10.39	8.24 - 12.30	20,941
<b>Laundry and Dry-Cleaning Workers</b>					
<b>51-6011</b>	U.S.	7.99	7.59	6.46 - 8.98	16,630
	Montana	7.13	6.95	6.07 - 8.12	14,830
	Yellowstone County MSA	7.10	7.00	6.14 - 8.01	14,766
	Cascade County MSA	7.77	7.60	6.38 - 9.16	16,170
<b>Pressers, Textile, Garment and Related Materials</b>					
<b>51-6021</b>	U.S.	8.14	7.77	6.63 - 9.28	16,940
	Montana	7.35	7.60	7.03 - 8.16	15,290
	Yellowstone County MSA	6.70	6.75	6.03 - 7.70	13,943
<b>Sewing Machine Operators</b>					
<b>51-6031</b>	U.S.	8.39	7.80	6.54 - 9.66	17,450
	Montana	7.96	7.45	6.26 - 9.24	16,546
	Yellowstone County MSA	8.08	7.90	7.18 - 8.81	16,811
<b>Sewers, Hand</b>					
<b>51-6051</b>	U.S.	9.09	8.09	6.92 - 10.17	18,900
	Montana	8.07	7.15	6.08 - 8.60	16,777
<b>Tailors, Dressmakers and Custom Sewers</b>					
<b>51-6052</b>	U.S.	11.20	10.14	7.90 - 13.52	23,300
	Montana	7.86	7.79	7.26 - 8.33	16,342
	Yellowstone County MSA	8.12	7.97	7.12 - 8.91	16,885
<b>Upholsterers</b>					
<b>51-6093</b>	U.S.	12.30	11.42	9.16 - 14.90	25,580
	Montana	12.07	11.81	8.85 - 15.19	25,106
<b>Cabinetmakers and Bench Carpenters</b>					
<b>51-7011</b>	U.S.	11.60	10.83	8.69 - 13.72	24,140
	Montana	11.29	11.02	8.78 - 13.59	23,487
	Yellowstone County MSA	12.47	11.98	9.83 - 14.92	25,939
	Cascade County MSA	10.72	10.53	9.04 - 12.30	22,290
	Missoula County MSA	10.30	10.07	7.72 - 12.95	21,417

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Furniture Finishers</b>					
<b>51-7021</b>	U.S.	10.95	10.34	8.49 - 12.93	22,770
	Montana	8.63	7.90	6.24 - 10.37	17,950
	Yellowstone County MSA	10.75	10.04	9.27 - 11.36	22,353
<b>Sawing Machine Setters, Operators and Tenders, Wood</b>					
<b>51-7041</b>	U.S.	10.71	10.23	8.40 - 12.60	22,290
	Montana	11.06	10.89	9.11 - 12.85	23,007
	Missoula County MSA	11.98	12.52	9.99 - 14.74	24,922
<b>Woodworking Machine Setters, Operators and Tenders, Except Sawing</b>					
<b>51-7042</b>	U.S.	10.44	10.00	8.19 - 12.32	21,710
	Montana	9.90	9.11	7.83 - 10.71	20,602
	Missoula County MSA	13.30	14.37	11.27 - 15.69	27,664
<b>Power Distributors and Dispatchers</b>					
<b>51-8012</b>	U.S.	23.65	23.35	19.17 - 28.02	49,190
	Montana	27.04	27.13	24.15 - 30.82	56,252
<b>Power Plant Operators</b>					
<b>51-8013</b>	U.S.	21.79	22.16	17.94 - 26.06	45,330
	Montana	23.94	23.68	20.18 - 28.15	49,802
<b>Stationary Engineers and Boiler Operators</b>					
<b>51-8021</b>	U.S.	19.94	19.43	15.14 - 24.56	41,470
	Montana	17.16	16.08	13.53 - 20.03	35,701
	Yellowstone County MSA	22.79	22.71	16.77 - 29.33	47,411
	Missoula County MSA	15.81	15.70	14.62 - 16.79	32,875
<b>Water and Liquid Waste Treatment Plant and System Operators</b>					
<b>51-8031</b>	U.S.	15.60	15.09	11.73 - 19.00	32,450
	Montana	12.77	12.63	10.70 - 15.28	26,557
	Yellowstone County MSA	11.86	11.24	9.64 - 14.27	24,659
<b>Chemical Plant and System Operators</b>					
<b>51-8091</b>	U.S.	19.31	19.59	15.89 - 23.19	40,160
	Montana	19.32	20.40	18.20 - 22.27	40,184
	Yellowstone County MSA	20.70	20.55	19.02 - 21.98	43,061
<b>Petroleum Pump System Operators, Refinery Operators and Gaugers</b>					
<b>51-8093</b>	U.S.	21.15	21.72	18.02 - 25.20	43,980
	Montana	25.14	25.65	22.22 - 30.46	52,284
	Yellowstone County MSA	25.45	25.91	22.56 - 30.71	52,929
<b>Separating, Filtering, Clarifying, Precipitating and Still Machine Setters, Operators and Tenders</b>					
<b>51-9012</b>	U.S.	13.77	13.09	9.89 - 16.91	28,650
	Montana	15.22	14.84	12.45 - 17.74	31,662

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## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Crushing, Grinding and Polishing Machine Setters, Operators and Tenders</b>					
<b>51-9021</b>	U.S.	12.60	11.99	9.48 - 15.32	26,200
	Montana	13.47	12.50	10.42 - 16.14	28,010
<b>Grinding and Polishing Workers, Hand</b>					
<b>51-9022</b>	U.S.	11.53	10.48	8.61 - 13.34	23,990
	Montana	11.17	10.02	8.01 - 12.85	23,228
<b>Mixing and Blending Machine Setters, Operators and Tenders</b>					
<b>51-9023</b>	U.S.	13.05	12.58	9.80 - 15.91	27,150
	Montana	16.19	17.43	11.02 - 20.08	33,674
	Yellowstone County MSA	14.65	11.07	9.87 - 19.75	30,482
<b>Cutters and Trimmers, Hand</b>					
<b>51-9031</b>	U.S.	11.07	9.78	7.55 - 12.80	23,030
	Montana	9.57	9.43	6.54 - 12.23	19,916
<b>Extruding, Forming, Pressing and Compacting Machine Setters, Operators and Tenders</b>					
<b>51-9041</b>	U.S.	12.57	11.94	9.48 - 15.26	26,150
	Montana	10.38	8.32	7.52 - 11.06	21,583
<b>Furnace, Kiln, Oven, Drier and Kettle Operators and Tenders</b>					
<b>51-9051</b>	U.S.	13.60	13.13	10.45 - 16.40	28,300
	Montana	12.44	12.22	11.30 - 13.13	25,871
<b>Inspectors, Testers, Sorters, Samplers and Weighers</b>					
<b>51-9061</b>	U.S.	13.47	12.22	9.26 - 16.55	28,010
	Montana	13.90	13.10	9.38 - 17.48	28,917
	Yellowstone County MSA	17.85	19.96	11.36 - 24.66	37,129
	Cascade County MSA	14.61	14.62	11.64 - 17.42	30,382
	Missoula County MSA	12.60	12.88	9.79 - 15.44	26,205
<b>Jewelers and Precious Stone and Metal Workers</b>					
<b>51-9071</b>	U.S.	13.91	12.66	9.20 - 16.90	28,930
	Montana	11.32	10.92	9.73 - 12.71	23,544
	Yellowstone County MSA	10.59	10.22	9.48 - 10.95	22,023
	Cascade County MSA	13.30	14.02	11.16 - 17.36	27,666
<b>Dental Laboratory Technicians</b>					
<b>51-9081</b>	U.S.	14.04	12.94	9.83 - 16.82	29,200
	Montana	16.80	12.86	9.39 - 20.71	34,942
<b>Medical Appliance Technicians</b>					
<b>51-9082</b>	U.S.	13.44	11.97	8.96 - 16.05	27,950
	Montana	10.19	9.12	7.48 - 10.38	21,198

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Ophthalmic Laboratory Technicians</b>					
<b>51-9083</b>	U.S.	10.45	9.88	8.25 - 12.07	21,740
	Montana	12.16	12.46	11.67 - 13.25	25,285
	Cascade County MSA	12.33	12.53	11.79 - 13.28	25,644
<b>Packaging and Filling Machine Operators and Tenders</b>					
<b>51-9111</b>	U.S.	10.43	9.45	7.49 - 12.71	21,700
	Montana	8.77	8.21	7.12 - 10.45	18,235
	Yellowstone County MSA	8.86	8.41	7.56 - 10.08	18,428
	Cascade County MSA	10.35	9.60	7.98 - 12.49	21,534
	Missoula County MSA	8.32	7.75	6.42 - 10.68	17,314
<b>Coating, Painting and Spraying Machine Setters, Operators and Tenders</b>					
<b>51-9121</b>	U.S.	12.09	11.37	9.11 - 14.11	25,140
	Montana	12.67	11.14	9.07 - 15.98	26,353
	Missoula County MSA	12.20	11.87	8.69 - 14.73	25,375
<b>Painters, Transportation Equipment</b>					
<b>51-9122</b>	U.S.	15.82	14.64	11.43 - 19.45	32,910
	Montana	10.69	10.07	9.29 - 11.63	22,242
<b>Painting, Coating and Decorating Workers</b>					
<b>51-9123</b>	U.S.	10.48	9.55	7.56 - 12.48	21,810
	Montana	10.70	9.73	8.34 - 11.76	22,261
<b>Photographic Processing Machine Operators</b>					
<b>51-9132</b>	U.S.	9.39	8.39	7.06 - 10.56	19,540
	Montana	8.57	8.31	7.10 - 9.87	17,818
	Yellowstone County MSA	8.69	8.53	7.40 - 9.93	18,072
	Cascade County MSA	8.16	8.33	7.08 - 9.52	16,967
	Missoula County MSA	9.24	9.02	6.57 - 10.77	19,228
<b>Cementing and Gluing Machine Operators and Tenders</b>					
<b>51-9191</b>	U.S.	11.14	10.49	8.39 - 13.21	23,170
	Montana	13.76	14.19	12.58 - 15.65	28,625
<b>Cleaning, Washing and Metal Pickling Equipment Operators and Tenders</b>					
<b>51-9192</b>	U.S.	11.10	10.17	8.04 - 13.29	23,100
	Montana	14.99	15.71	13.49 - 18.34	31,171
<b>Molders, Shapers and Casters, Except Metal and Plastic</b>					
<b>51-9195</b>	U.S.	11.83	11.24	8.87 - 14.09	24,620
	Montana	8.89	8.26	7.50 - 10.33	18,494

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Helpers, Production Workers</b>					
<b>51-9198</b>	U.S.	9.30	8.66	7.13 - 10.70	19,350
	Montana	9.15	8.30	6.88 - 10.53	19,038
	Yellowstone County MSA	9.11	8.14	7.56 - 8.73	18,951
	Missoula County MSA	9.18	9.09	6.43 - 11.89	19,096
<b>Transportation and Material Moving Occupations</b>					
<b>Aircraft Cargo Handling Supervisors</b>					
<b>53-1011</b>	U.S.	19.57	18.19	13.26 - 24.47	40,710
	Montana	16.24	17.47	12.22 - 19.58	33,786
<b>First-Line Supervisors/Managers of Helpers, Laborers and Material Movers, Hand</b>					
<b>53-1021</b>	U.S.	17.75	16.73	12.91 - 21.45	36,910
	Montana	13.21	12.08	9.97 - 15.93	27,469
	Yellowstone County MSA	15.14	14.49	11.60 - 17.77	31,489
	Missoula County MSA	20.23	20.66	17.41 - 23.95	42,069
<b>First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators</b>					
<b>53-1031</b>	U.S.	20.73	19.37	14.52 - 25.14	43,120
	Montana	21.28	19.67	13.64 - 28.66	44,263
	Cascade County MSA	25.00	26.12	15.45 - 32.49	52,001
	Missoula County MSA	20.52	20.29	13.00 - 28.10	42,682
<b>Airline Pilots, Copilots and Flight Engineers</b>					
<b>53-2011</b>	U.S.		annual wages only		99,770
	Montana		annual wages only		40,920
<b>Commercial Pilots</b>					
<b>53-2012</b>	U.S.		annual wages only		51,370
	Montana		annual wages only		34,226
<b>Air Traffic Controllers</b>					
<b>53-2021</b>	U.S.	38.20	39.67	29.93 - 48.83	79,460
	Montana	30.22	30.72	28.23 - 33.22	62,859
<b>Ambulance Drivers and Attendants, Except Emergency Medical Technicians</b>					
<b>53-3011</b>	U.S.	9.46	8.57	7.11 - 10.68	19,680
	Montana	6.38	6.22	5.68 - 6.76	13,270
<b>Bus Drivers, Transit and Intercity</b>					
<b>53-3021</b>	U.S.	13.10	12.36	9.47 - 16.78	27,250
	Montana	11.35	9.90	7.37 - 15.87	23,600

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<b>Bus Drivers, School 53-3022</b>	U.S.	10.31	10.05	7.28 - 12.74	21,430
	Montana	10.21	10.08	8.36 - 11.98	21,247
	Cascade County MSA	10.76	11.27	9.59 - 12.49	22,376
	Missoula County MSA	9.67	8.63	7.61 - 11.71	20,115
<b>Driver/Sales Workers 53-3031</b>	U.S.	11.08	9.79	6.70 - 14.28	23,060
	Montana	8.89	6.67	5.93 - 11.93	18,485
	Yellowstone County MSA	10.28	10.18	6.65 - 13.66	21,390
	Cascade County MSA	7.60	6.36	5.80 - 8.61	15,808
	Missoula County MSA	8.19	6.47	5.81 - 11.23	17,031
<b>Truck Drivers, Heavy and Tractor-Trailer 53-3032</b>	U.S.	15.78	15.25	11.97 - 19.12	32,810
	Montana	13.86	12.99	9.16 - 17.45	28,827
	Yellowstone County MSA	11.82	8.77	7.87 - 15.57	24,591
	Cascade County MSA	15.31	13.34	10.87 - 19.20	31,837
	Missoula County MSA	13.97	13.08	11.65 - 15.70	29,052
<b>Truck Drivers, Light Or Delivery Services 53-3033</b>	U.S.	11.84	10.74	8.19 - 14.48	24,620
	Montana	11.05	9.36	7.45 - 13.57	22,982
	Yellowstone County MSA	9.81	8.34	7.01 - 12.25	20,398
	Cascade County MSA	12.05	10.27	7.88 - 15.35	25,070
	Missoula County MSA	9.86	9.31	7.54 - 11.72	20,506
<b>Taxi Drivers and Chauffeurs 53-3041</b>	U.S.	9.10	8.19	6.68 - 10.46	18,920
	Montana	7.31	6.61	5.93 - 9.05	15,196
	Yellowstone County MSA	6.66	6.26	5.72 - 6.98	13,852
	Missoula County MSA	7.46	6.83	6.05 - 8.76	15,512
<b>Locomotive Engineers 53-4011</b>	U.S.	21.20	21.26	15.77 - 25.30	44,090
	Montana	21.57	21.70	15.14 - 25.78	44,875
<b>Rail Yard Engineers, Dinkey Operators and Hostlers 53-4013</b>	U.S.	19.22	17.69	14.43 - 20.38	39,980
	Montana	16.37	15.90	12.60 - 19.82	34,048
<b>Railroad Brake, Signal and Switch Operators 53-4021</b>	U.S.	20.16	18.82	14.60 - 25.26	41,930
	Montana	20.26	17.52	14.13 - 28.41	42,139

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Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range		Annual Average
<b>Parking Lot Attendants</b>						
<b>53-6021</b>	U.S.	7.69	7.15	6.27	- 8.46	15,990
	Montana	7.55	7.28	6.29	- 8.29	15,703
	Yellowstone County MSA	7.44	6.99	6.09	- 8.51	15,479
	Missoula County MSA	7.63	7.48	6.67	- 8.23	15,877
<b>Service Station Attendants</b>						
<b>53-6031</b>	U.S.	7.87	7.35	6.38	- 8.56	16,370
	Montana	7.31	6.89	6.08	- 8.28	15,200
<b>Transportation Inspectors</b>						
<b>53-6051</b>	U.S.	21.25	21.68	14.86	- 26.64	44,200
	Montana	27.25	28.77	20.88	- 32.62	56,675
<b>Conveyor Operators and Tenders</b>						
<b>53-7011</b>	U.S.	11.50	10.70	8.79	- 13.28	23,920
	Montana	11.02	11.44	8.35	- 13.27	22,920
<b>Crane and Tower Operators</b>						
<b>53-7021</b>	U.S.	16.99	15.89	12.59	- 20.51	35,340
	Montana	20.05	19.40	16.31	- 22.21	41,706
<b>Excavating and Loading Machine and Dragline Operators</b>						
<b>53-7032</b>	U.S.	16.10	14.94	11.90	- 19.65	33,480
	Montana	16.60	16.00	14.18	- 19.11	34,536
<b>Industrial Truck and Tractor Operators</b>						
<b>53-7051</b>	U.S.	12.54	11.74	9.56	- 14.64	26,090
	Montana	11.58	10.67	9.02	- 13.71	24,096
	Yellowstone County MSA	11.39	10.75	9.37	- 13.31	23,690
	Cascade County MSA	15.31	10.61	9.55	- 21.14	31,848
	Missoula County MSA	10.89	10.75	8.69	- 13.44	22,644
<b>Cleaners of Vehicles and Equipment</b>						
<b>53-7061</b>	U.S.	8.36	7.55	6.40	- 9.49	17,380
	Montana	7.54	6.66	5.96	- 8.06	15,688
	Yellowstone County MSA	7.05	6.69	6.01	- 7.95	14,661
	Cascade County MSA	7.96	7.72	7.01	- 8.41	16,550
	Missoula County MSA	7.65	7.25	6.19	- 9.08	15,920
<b>Laborers and Freight, Stock and Material Movers, Hand</b>						
<b>53-7062</b>	U.S.	9.84	9.04	7.33	- 11.39	20,460
	Montana	8.71	8.11	6.87	- 10.12	18,116
	Yellowstone County MSA	7.97	7.72	6.72	- 8.76	16,576
	Cascade County MSA	8.78	8.32	7.05	- 10.17	18,269
	Missoula County MSA	9.75	8.79	7.36	- 11.70	20,275

# indicates a wage greater than \$70 per hour or \$145,600 per year; \* indicates a wage estimate is not available

## 2000 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
<b>Machine Feeders and Offbearers</b>					
<b>53-7063</b>	U.S.	10.43	9.69	7.92 - 12.10	21,690
	Montana	10.87	10.00	8.66 - 12.47	22,607
	Missoula County MSA	11.00	10.92	9.66 - 12.51	22,876
<b>Packers and Packagers, Hand</b>					
<b>53-7064</b>	U.S.	8.19	7.53	6.39 - 9.43	17,030
	Montana	7.90	6.73	5.99 - 9.20	16,430
	Yellowstone County MSA	6.87	6.40	5.84 - 6.98	14,280
	Cascade County MSA	7.38	6.74	5.98 - 7.98	15,344
	Missoula County MSA	8.31	7.52	6.17 - 9.93	17,289
<b>Gas Compressor and Gas Pumping Station Operators</b>					
<b>53-7071</b>	U.S.	20.05	20.32	16.67 - 24.52	41,700
	Montana	19.35	19.55	18.31 - 20.80	40,240
<b>Pump Operators, Except Wellhead Pumpers</b>					
<b>53-7072</b>	U.S.	18.00	17.16	11.97 - 24.12	37,440
	Montana	12.92	12.47	10.60 - 14.76	26,876
<b>Wellhead Pumpers</b>					
<b>53-7073</b>	U.S.	16.04	16.35	11.85 - 20.10	33,360
	Montana	16.69	16.67	14.69 - 19.37	34,722
<b>Refuse and Recyclable Material Collectors</b>					
<b>53-7081</b>	U.S.	12.51	11.83	8.84 - 15.78	26,020
	Montana	11.39	11.62	9.12 - 13.15	23,689
	Yellowstone County MSA	11.32	11.77	8.70 - 13.06	23,547
<b>Tank Car, Truck and Ship Loaders</b>					
<b>53-7121</b>	U.S.	15.62	13.78	10.80 - 20.19	32,490
	Montana	13.38	12.98	11.86 - 14.87	27,829

# indicates a wage greater than \$70 per hour or \$145,600 per year; \* indicates a wage estimate is not available

Information prepared by the Research and Analysis Bureau, Montana Department of Labor and Industry, Workforce Services Division, in cooperation with the Bureau of Labor Statistics (BLS) and Employment and Training Administration (ETA).

## OCCUPATIONAL CODE, TITLE AND DESCRIPTION

### Management Occupations

#### 11-1011 Chief Executives

Determine and formulate policies and provide the overall direction of companies or private and public sector organizations within the guidelines set up by a board of directors or similar governing body. Plan, direct, or coordinate operational activities at the highest level of management with the help of subordinate executives and staff managers.

*Illustrative Examples: School Superintendent, Chief Operating Officer*

#### 11-1021 General and Operations Managers

Plan, direct, or coordinate the operations of companies or public and private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Include owners and managers who head small business establishments whose duties are primarily managerial. Exclude "First-Line Supervisors/Managers of Retail Sales Workers" (41-1011) and workers in other small establishments.

*Illustrative Examples: Industrial Organization Manager, District Manager, Department Store General Manager*

#### 11-2011 Advertising and Promotions Managers

Plan and direct advertising policies and programs or produce collateral materials, such as posters, contests, coupons, or giveaways, to create extra interest in the purchase of a product or service for a department, an entire organization, or on an account basis.

*Illustrative Examples: Campaign Director, Circulation Director, Media Director*

#### 11-2021 Marketing Managers

Determine the demand for products and services offered by a firm and its competitors and identify potential customers. Develop pricing strategies with the goal of maximizing the firm's profits or share of the market while ensuring the firm's customers are satisfied. Oversee product development or monitor trends that indicate the need for new products and services.

*Illustrative Examples: Fashion Coordinator, Marketing Director*

#### 11-2022 Sales Managers

Direct the actual distribution or movement of a product or service to the customer. Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.

*Illustrative Examples: Director of Sales, Export Manager, Regional Sales Manager*

#### 11-2031 Public Relations Managers

Plan and direct public relations programs designed to create and maintain a favorable public image for employer or client; or if engaged in fundraising, plan and direct activities to solicit and maintain funds for special projects and nonprofit organizations.

*Illustrative Examples: Fundraising Director, Public Information Director, Publicity Director*

#### 11-3011 Administrative Services Managers

Plan, direct, or coordinate supportive services of an organization, such as recordkeeping, mail distribution, telephone operator/receptionist, and other office support services. May oversee facilities planning and maintenance and custodial operations. Exclude "Purchasing Managers" (11-3061).

*Illustrative Examples: Facilities Manager, Space Officer*

#### 11-3021 Computer and Information Systems Managers

Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming. Exclude "Computer Specialists" (15-1011 through 15-1099).

*Illustrative Examples: Data Processing Manager, Computer Programming Manager, Data Systems Manager*

#### 11-3031 Financial Managers

Plan, direct, and coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.

*Illustrative Examples: Bank Director, Comptroller, Budget Director*

**11-3051 Industrial Production Managers**

Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

*Illustrative Examples: Factory Superintendent, Plant Manager, Quality Control Manager*

**11-3061 Purchasing Managers**

Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services. Include wholesale or retail trade merchandising managers and procurement managers.

*Illustrative Examples: Director of Purchasing, Merchandise Manager, Procurement Manager*

**11-3071 Transportation, Storage and Distribution Managers**

Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with governmental policies and regulations. Include logistics managers.

*Illustrative Examples: Airport Manager, Schedule Planning Manager, Warehouse Manager*

**11-9011 Farm, Ranch and Other Agricultural Managers**

(Nursery and Greenhouse Manager) On a paid basis, manage farms, ranches, aquacultural operations, greenhouses, nurseries, timber tracts, cotton gins, packinghouses, or other agricultural establishments for employers. Carry out production, financial, and marketing decisions relating to the managed operations following guidelines from the owner. May contract tenant farmers or producers to carry out the day-to-day activities of the managed operation. May supervise planting, cultivating, harvesting, and marketing activities. May prepare cost, production and other records. May perform physical work and operate machinery.

*Illustrative Examples: Fruit Grower, Farm Livestock Manager*

**11-9021 Construction Managers**

Plan, direct, coordinate, or budget, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, and implementation. Include specialized construction fields, such as carpentry or plumbing. Include general superintendents, project managers, and constructors who manage, coordinate, and supervise the construction process.

*Illustrative Examples: Masonry Contractor Administrator, Developer, General Contractor*

**11-9031 Education Administrators, Preschool and Child Care Center/Program**

Plan, direct, or coordinate the academic and nonacademic activities of preschool and child care centers or programs. Exclude "Preschool Teachers" (25-2011).

*Illustrative Examples: Director of Child Care Center, Head Start Director*

**11-9032 Education Administrators, Elementary and Secondary School**

Plan, direct, or coordinate the academic, clerical, or auxiliary activities of public or private elementary or secondary level schools.

*Illustrative Examples: Director of Physical Education, Curriculum Director, School Principal*

**11-9033 Education Administrators, Postsecondary**

Plan, direct, or coordinate research, instructional, student administration and services, and other educational activities at postsecondary institutions, including universities, colleges, and junior and community colleges.

*Illustrative Examples: Director of Student Affairs, Dean, Registrar*

**11-9041 Engineering Managers**

Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields. Exclude "Natural Sciences Managers" (11-9121).

*Illustrative Examples: Engineering Research Manager, Safety Director, Technical Director*

**11-9051 Food Service Managers**

Plan, direct, or coordinate activities of an organization or department that serves food and beverages.

*Illustrative Examples: Banquet Director, Restaurant Manager, Catering Manager*

**11-9061 Funeral Directors**

(Mortician) Perform various tasks to arrange and direct funeral services, such as coordinating transportation of body to mortuary for embalming, interviewing family or other authorized person to arrange details, selecting pallbearers, procuring official for religious rites, and providing transportation for mourners.

*Illustrative Examples: Funeral Home Manager, Undertaker*



**11-9081 Lodging Managers**

Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations. Exclude "Food Service Managers" (11-9051) in lodging establishments.

*Illustrative Examples: Director of Housing, Innkeeper, Hotel Manager*

**11-9111 Medical and Health Services Managers**

Plan, direct, or coordinate medicine and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.

*Illustrative Examples: Director of Occupational Therapy, Medical Records Administrator, Public Health Administrator*

**11-9121 Natural Sciences Managers**

Plan, direct, or coordinate activities in such fields as life sciences, physical sciences, mathematics, statistics, and research and development in these fields. Exclude "Engineering Managers" (11-9041) and "Computer and Information Systems Managers" (11-3021).

*Illustrative Examples: Geophysical Manager, Research and Development Director, Wildlife Manager*

**11-9131 Postmasters and Mail Superintendents**

Direct and coordinate operational, administrative, management, and supportive services of a U.S. post office; or coordinate activities of workers engaged in postal and related work in assigned post office.

**11-9141 Property, Real Estate and Community Association Managers**

Plan, direct, or coordinate selling, buying, leasing, or governance activities of commercial, industrial, or residential real estate properties. Include managers of homeowner and condominium associations, rented or leased housing units, buildings, or land (including rights-of-way).

*Illustrative Examples: Condominium Association Manager, Trailer Park Manager*

**11-9151 Social and Community Service Managers**

Plan, organize, or coordinate the activities of a social service program or community outreach organization. Oversee the program or organization's budget and policies regarding participant involvement, program requirements, and benefits. Work may involve directing social workers, counselors, or probation officers.

*Illustrative Examples: Child Welfare Director, Youth Program Director, Director of Casework Services*

**Business and Financial Operations Occupations****13-1021 Purchasing Agents and Buyers, Farm Products**

Purchase farm products either for further processing or resale. Include Christmas tree contractors, grain brokers and market operators, grain buyers, and tobacco buyers.

*Illustrative Examples: Cotton Broker, Livestock Buyer, Tobacco Buyer*

**13-1022 Wholesale and Retail Buyers, Except Farm Products**

Buy merchandise or commodities, other than farm products, for resale to consumers at the wholesale or retail level, including both durable and nondurable goods. Analyze past buying trends, sales records, price, and quality of merchandise to determine value and yield. Select, order, and authorize payment for merchandise according to contractual agreements. May conduct meetings with sales personnel and introduce new products. Include assistant buyers.

*Illustrative Examples: Importer, Merchandiser, Wholesale Jobber*

**13-1023 Purchasing Agents, Except Wholesale, Retail and Farm Products**

Purchase machinery, equipment, tools, parts, supplies, or services necessary for the operation of an establishment. Purchase raw or semifinished materials for manufacturing. Include contract specialists, field contractors, purchasers, price analysts, tooling coordinators, and media buyers. Exclude "Purchasing Agents and Buyers, Farm Products" (13-1021) and "Wholesale and Retail Buyers, Except Farm Products" (13-1022).

*Illustrative Examples: Fuel Buyer, Lumber Buyer, Radio Time Buyer*

**13-1031 Claims Adjusters, Examiners and Investigators**

Review settled claims to determine that payments and settlements have been made in accordance with company practices and procedures, ensuring that proper methods have been followed. Report overpayments, underpayments, and other irregularities. Confer with legal counsel on claims requiring litigation.

*Illustrative Examples: Health Insurance Adjuster, Arson Investigator, Claims Agent*

**13-1041 Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation**

Examine, evaluate, and investigate eligibility for or conformity with laws and regulations governing contract compliance of licenses and permits, and other compliance and enforcement inspection activities not classified elsewhere. Exclude "Tax Examiners, Collectors and Revenue Agents" (13-2081) and "Financial Examiners" (13-2061).

*Illustrative Examples: Truant Officer, Coroner, Inspector of Weights and Measures*

**13-1051 Cost Estimators**

Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

*Illustrative Examples: Construction Estimator, Crating and Moving Estimator, Job Estimator*

**13-1071 Employment, Recruitment and Placement Specialists**

Recruit and place workers.

*Illustrative Examples: Employment Interviewer, Personnel Recruiter, Placement Assistant*

**13-1072 Compensation, Benefits and Job Analysis Specialists**

Conduct programs of compensation and benefits and job analysis for employer. May specialize in specific areas, such as position classification and pension programs.

*Illustrative Examples: Occupational Analyst, Relocation Director, Wage Conciliator*

**13-1073 Training and Development Specialists**

Conduct training and development programs for employees.

*Illustrative Examples: Training Coordinator, Workforce Development Specialist, Supervisor, Training Personnel*

**13-1111 Management Analysts**

Conduct organizational studies and evaluations, design systems and procedures, conduct work simplifications and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Include program analysts and management consultants. Exclude "Computer Systems Analysts" (15-1051) and "Operations Research Analysts" (15-2031).

*Illustrative Examples: Business Consultant, Industrial Analyst*

**13-1121 Meeting and Convention Planners**

Coordinate activities of staff and convention personnel to make arrangements for group meetings and conventions.

*Illustrative Examples: Conference Planner, Conference Service Coordinator, Convention Manager*

**13-2011 Accountants and Auditors**

Examine, analyze, and interpret accounting records for the purpose of giving advice or preparing statements. Install or advise on systems of recording costs or other financial and budgetary data.

*Illustrative Examples: Bursar, Certified Public Accountant, Tax Accountant*

**13-2021 Appraisers and Assessors of Real Estate**

Appraise real property to determine its fair value. May assess taxes in accordance with prescribed schedules.

*Illustrative Examples: Building Appraiser, County Assessor, Property Evaluator*

**13-2031 Budget Analysts**

Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations. Analyze budgeting and accounting reports for the purpose of maintaining expenditure controls.

*Illustrative Examples: Budget Examiner, Fiscal Agent, Fiscal Officer*

**13-2041 Credit Analysts**

Analyze current credit data and financial statements of individuals or firms to determine the degree of risk involved in extending credit or lending money. Prepare reports with this credit information for use in decision making.

*Illustrative Examples: Credit Negotiator, Escrow Representative, Factorer*

**13-2051 Financial Analysts**

Conduct quantitative analyses of information affecting investment programs of public or private institutions.

*Illustrative Examples: Bond Analyst, Investment Analyst, Securities Consultant*

**13-2052 Personal Financial Advisors**

Advise clients on financial plans utilizing knowledge of tax and investment strategies, securities, insurance, pension plans, and real estate. Duties include assessing clients' assets, liabilities, cash flow, insurance coverage, tax status, and financial objectives to establish investment strategies.

*Illustrative Examples: Budget Counselor, Financial Planner, Estate Planner*

**13-2061 Financial Examiners**

Enforce or ensure compliance with laws and regulations governing financial and securities institutions and financial and real estate transactions. May examine, verify correctness of, or establish authenticity of records.

*Illustrative Examples: Bank Examiner, Payroll Examiner, Pension Examiner*

**13-2071 Loan Counselors**

(Credit Counselor) Provide guidance to prospective loan applicants who have problems qualifying for traditional loans. Guidance may include determining the best type of loan and explaining loan requirements or restrictions.

*Illustrative Examples: Farm Mortgage Agent, Financial Aid Counselor*

**13-2072 Loan Officers**

Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and methods of payments. Include mortgage loan officers and agents, collection analysts, loan servicing officers, and loan underwriters.

*Illustrative Examples: Loan Reviewer, Escrow Officer, Mortgage Consultant*

**13-2081 Tax Examiners, Collectors and Revenue Agents**

Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.

*Illustrative Examples: Tax Investigator, Revenue Agent, Tax Auditor*

**13-2082 Tax Preparers**

Prepare tax returns for individuals or small businesses but do not have the background or responsibilities of an accredited or certified public accountant.

*Illustrative Examples: Income Tax Advisor, Income Tax Consultant, Tax Specialist*

## **Computer and Mathematical Occupations**

**15-1011 Computer and Information Scientists, Research**

Conduct research into fundamental computer and information science as theorists, designers, or inventors. Solve or develop solutions to problems in the field of computer hardware and software.

**15-1021 Computer Programmers**

Convert project specifications and statements of problems and procedures to detailed logical flowcharts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program web sites.

*Illustrative Examples: Computer Programmer Aide, Mainframe Programmer, Systems Programmer*

**15-1031 Computer Software Engineers, Applications**

Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team. Exclude "Computer Hardware Engineers" (17-2061).

*Illustrative Examples: Applications Developer, Programmer Analyst, Software Designer*

**15-1032 Computer Software Engineers, Systems Software**

Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications. Set operational specifications and formulate and analyze software requirements. Apply principles and techniques of computer science, engineering, and mathematical analysis.

*Illustrative Example: EDP Systems Engineers*

**15-1041 Computer Support Specialists**

Provide technical assistance to computer system users. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems. Exclude "Network and Computer Systems Administrators" (15-1071).

*Illustrative Examples: Customer Support Analyst, Help Desk Technician, Workstation Support Specialist*

**15-1051 Computer Systems Analysts**

Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, work flow, and scheduling limitations. May analyze or recommend commercially available software. Exclude persons working primarily as “Engineers” (17-2011 through 17-2199), “Mathematicians” (15-2021), or “Scientists” (19-1011 through 19-3099). May supervise computer programmers.

*Illustrative Examples: Health Systems Computer Analyst, Data Processing Systems Project Planner, Information Systems Consultant*

**15-1061 Database Administrators**

Coordinate changes to computer databases, test and implement the database applying knowledge of database management systems. May plan, coordinate, and implement security measures to safeguard computer databases.

*Illustrative Examples: Automatic Data Processing Planner, Database Design Analyst, Database Security Administrator*

**15-1071 Network and Computer Systems Administrators**

Install, configure, and support an organization’s local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software. Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures. Exclude “Computer Support Specialists” (15-1041).

*Illustrative Examples: LAN/WAN Administrator, Network Control Operator, Network Security Administrator*

**15-1081 Network Systems and Data Communications Analysts**

Analyze, design, test, and evaluate network systems, such as local area networks (LAN), wide area networks (WAN), Internet, intranet, and other data communications systems. Perform network modeling, analysis, and planning. Research and recommend network and data communications hardware and software. Include telecommunications specialists who deal with the interfacing of computer and communications equipment. May supervise computer programmers.

*Illustrative Examples: Internet Developer, Systems Integrator, Webmaster*

**15-2041 Statisticians**

Engage in the development of mathematical theory or apply statistical theory and methods to collect, organize, interpret, and summarize numerical data to provide usable information. May specialize in fields, such as biostatistics, agricultural statistics, business statistics, economic statistics, or other fields. Include mathematical statisticians.

*Illustrative Examples: Biometrician, Sampling Expert, Statistical Analyst*

## Architecture and Engineering Occupations

**17-1011 Architects, Except Landscape and Naval**

Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.

*Illustrative Examples: Architectural Designer, Building Consultant, Site Planner*

**17-1012 Landscape Architects**

Plan and design land areas for such projects as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.

*Illustrative Examples: Environmental Planner, Land Planner, Landscape Designer*

**17-1021 Cartographers and Photogrammetrists**

Collect, analyze, and interpret geographic information provided by geodetic surveys, aerial photographs, and satellite data. Research, study, and prepare maps and other spatial data in digital or graphic form for legal, social, political, educational, and design purposes. May work with Geographic Information Systems (GIS). May design and evaluate algorithms, data structures, and user interfaces for GIS and mapping systems.

*Illustrative Examples: Field Map Editor, Mapper, Topographer*

**17-1022 Surveyors**

Make exact measurements and determine property boundaries. Provide data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features on or near the earth’s surface for engineering, mapmaking, mining, land evaluation, construction, and other purposes.

*Illustrative Examples: Geodetic Surveyor, Land Examiner, Mineral Surveyor*

**17-2041 Chemical Engineers**

Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.

*Illustrative Examples: Absorption and Adsorption Engineer, Explosives Engineer, Fuels Engineer*

**17-2051 Civil Engineers**

Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, water and sewage systems, and waste disposal units. Include architectural, structural, traffic, ocean, and geo-technical engineers. Exclude "Hydrologists" (19-2043).

*Illustrative Examples: Bridge Engineer, Construction Engineer, Concrete Engineer*

**17-2061 Computer Hardware Engineers**

Research, design, develop, and test computer or computer-related equipment for commercial, industrial, military, or scientific use. May supervise the manufacturing and installation of computer or computer-related equipment and components. Exclude "Computer Software Engineers, Applications" (15-1031) and "Computer Software Engineers, Systems Software" (15-1032).

**17-2071 Electrical Engineers**

Design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Exclude "Computer Hardware Engineers" (17-2061).

*Illustrative Examples: Power Distribution Engineer, Illuminating Engineer, Relay Engineer*

**17-2072 Electronics Engineers, Except Computer**

Research, design, develop, and test electronic components and systems for commercial, industrial, military, or scientific use utilizing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls. Exclude "Computer Hardware Engineers" (17-2061).

*Illustrative Examples: Communications Engineer, Circuit Design Engineer, Guidance and Control Systems Engineer*

**17-2081 Environmental Engineers**

Design, plan, or perform engineering duties in the prevention, control, and remediation of environmental health hazards utilizing various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

*Illustrative Examples: Soil Engineer, Industrial Hygiene Engineer, Pollution Control Engineer*

**17-2111 Health and Safety Engineers, Except Mining Safety Engineers and Inspectors**

Promote work site or product safety by applying knowledge of industrial processes, mechanics, chemistry, psychology, and industrial health and safety laws. Include industrial product safety engineers.

*Illustrative Examples: Fire Protection Engineer, Industrial Health Engineer, Product Safety Engineer*

**17-2112 Industrial Engineers**

Design, develop, test, and evaluate integrated systems for managing industrial production processes including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination. Exclude "Health and Safety Engineers, Except Mining Safety Engineers and Inspectors" (17-2111).

*Illustrative Examples: Packaging Engineer, Time Study Engineer, Plant Engineer*

**17-2141 Mechanical Engineers**

Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of such equipment as centralized heat, gas, water, and steam systems.

*Illustrative Examples: Combustion Engineer, Plant Equipment Engineer, Hydraulic Engineer*

**17-2151 Mining and Geological Engineers, Including Mining Safety Engineers**

Determine the location and plan the extraction of coal, metallic ores, nonmetallic minerals, and building materials, such as stone and gravel. Work involves conducting preliminary surveys of deposits or undeveloped mines and planning their development; examining deposits or mines to determine whether they can be worked at a profit; making geological and topographical surveys; evolving methods of mining best suited to character, type, and size of deposits; and supervising mining operations.

*Illustrative Examples: Exploration Engineer, Mineral Engineer, Mine Equipment Design Engineer*

**17-2171 Petroleum Engineers**

Devise methods to improve oil and gas well production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice to achieve economical and satisfactory progress.

*Illustrative Examples: Drilling Engineer, Natural Gas Engineer, Oil Well Surveying Engineer*

**17-3011 Architectural and Civil Drafters**

Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Utilize knowledge of building materials, engineering practices, and mathematics to complete drawings.

*Illustrative Example: Structural Drafter*

**17-3012 Electrical and Electronics Drafters**

Prepare wiring diagrams, circuit board assembly diagrams, and layout drawings used for manufacture, installation, and repair of electrical equipment in factories, power plants, and buildings.

**17-3013 Mechanical Drafters**

Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.

*Illustrative Examples: Die Designer, Aeronautical Drafter*

**17-3022 Civil Engineering Technicians**

Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.

*Illustrative Example: Highway Technician*

**17-3023 Electrical and Electronic Engineering Technicians**

Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions. Exclude "Broadcast Technicians" (27-4012).

*Illustrative Examples: Calibration Laboratory Technician, Semiconductor Development Technician, Instrumentation Technician*

**17-3024 Electro-Mechanical Technicians**

Operate, test, and maintain unmanned, automated, servo-mechanical, or electromechanical equipment. May operate unmanned submarines, aircraft, or other equipment at work sites, such as oil rigs, deep ocean exploration, or hazardous waste removal. May assist engineers in testing and designing robotics equipment.

**17-3025 Environmental Engineering Technicians**

Apply theory and principles of environmental engineering to modify, test, and operate equipment and devices used in the prevention, control, and remediation of environmental pollution, including waste treatment and site remediation. May assist in the development of environmental pollution remediation devices under direction of engineer.

*Illustrative Examples: Air Analysis Technician, Soil Technician*

**17-3026 Industrial Engineering Technicians**

Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May study and record time, motion, method, and speed involved in performance of production, maintenance, clerical, and other worker operations for such purposes as establishing standard production rates or improving efficiency.

*Illustrative Examples: Methods Study Analyst, Quality Control Technician, Time Study Analyst*

**17-3027 Mechanical Engineering Technicians**

Apply theory and principles of mechanical engineering to modify, develop, and test machinery and equipment under direction of engineering staff or physical scientists.

*Illustrative Examples: Heat Transfer Technician, Optomechanical Technician, Tool Analyst*

## **Life, Physical and Social Science Occupations**

**19-1022 Microbiologists**

Investigate the growth, structure, development, and other characteristics of microscopic organisms, such as bacteria, algae, or fungi. Include medical microbiologists who study the relationship between organisms and disease or the effects of antibiotics on microorganisms.

*Illustrative Examples: Bacteriologist, Cytologist, Virologist*

**19-1023 Zoologists and Wildlife Biologists**

Study the origins, behavior, diseases, genetics, and life processes of animals and wildlife. May specialize in wildlife research and management, including the collection and analysis of biological data to determine the environmental effects of present and potential use of land and water areas.

*Illustrative Examples: Ecologist, Herpetologist, Ornithologist*

**19-1031 Conservation Scientists**

Manage, improve, and protect natural resources to maximize their use without damaging the environment. May conduct soil surveys and develop plans to eliminate soil erosion or to protect rangelands from fire and rodent damage. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering. Exclude "Zoologists and Wildlife Biologists" (19-1023) and "Foresters" (19-1032).

*Illustrative Examples: Range Manager, Conservation Officer*

**19-1032 Foresters**

Manage forested lands for economic, recreational, and conservation purposes. May inventory the type, amount, and location of standing timber, appraise the timber's worth, negotiate the purchase, and draw up contracts for procurement. May determine how to conserve wildlife habitats, creek beds, water quality, and soil stability, and how best to comply with environmental regulations. May devise plans for planting and growing new trees, monitor trees for healthy growth, and determine the best time for harvesting. Develop forest management plans for public and privately owned forested lands.

*Illustrative Examples: Forest Ecologist, Timber Management Specialist*

**19-1042 Medical Scientists, Except Epidemiologists**

(Pharmacologist) Conduct research dealing with the understanding of human diseases and the improvement of human health. Engage in clinical investigation or other research, production, technical writing, or related activities. Include medical scientists such as physicians, dentists, public health specialists, pharmacologists, and medical pathologists. Exclude practitioners who provide medical or dental care or dispense drugs. Exclude "Microbiologist" (19-1022).

*Illustrative Examples: Cancer Researcher, Toxicologist*

**19-2021 Atmospheric and Space Scientists**

Investigate atmospheric phenomena and interpret meteorological data gathered by surface and air stations, satellites, and radar to prepare reports and forecasts for public and other uses. Include weather analysts and forecasters whose functions require the detailed knowledge of a meteorologist.

*Illustrative Examples: Climatologist, Meteorologist, Weather Forecaster*

**19-2031 Chemists**

Conduct qualitative and quantitative chemical analyses or chemical experiments in laboratories for quality or process control or to develop new products or knowledge. Exclude "Geoscientists, Except Hydrologists and Geographers" (19-2042) and "Biochemists and Biophysicists" (19-1021).

*Illustrative Examples: Inorganic Chemist, Chemical Analyst*

**19-2041 Environmental Scientists and Specialists, Including Health**

Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population. Utilizing knowledge of various scientific disciplines may collect, synthesize, study, report, and take action based on data derived from measurements or observations of air, food, soil, water, and other sources. Exclude "Zoologists and Wildlife Biologists" (19-1023), "Conservation Scientists" (19-1031), "Forest and Conservation Technicians" (19-4093), "Fish and Game Wardens" (33-3031), and "Forest and Conservation Workers" (45-4011).

*Illustrative Examples: Environmental Analyst, Water Pollution Specialist*

**19-2042 Geoscientists, Except Hydrologists and Geographers**

Study the composition, structure, and other physical aspects of the earth. May use geological, physics, and mathematics knowledge in exploration for oil, gas, minerals, or underground water; or in waste disposal, land reclamation, or other environmental problems. May study the earth's internal composition, atmospheres, oceans, and its magnetic, electrical, and gravitational forces. Include mineralogists, crystallographers, paleontologists, stratigraphers, geodesists, and seismologists.

*Illustrative Examples: Oceanographer, Paleontologist, Seismologist*

**19-2043 Hydrologists**

Research the distribution, circulation, and physical properties of underground and surface waters; study the form and intensity of precipitation, its rate of infiltration into the soil, movement through the earth, and its return to the ocean and atmosphere.

*Illustrative Example: Hydrogeologist*

**19-3011 Economists**

Conduct research, prepare reports, or formulate plans to aid in solution of economic problems arising from production and distribution of goods and services. May collect and process economic and statistical data using econometric and sampling techniques. Exclude "Market Research Analysts" (19-3021).

*Illustrative Examples: Econometrician, Economic Research Analyst, Industrial Economist*

**19-3021 Market Research Analysts**

Research market conditions in local, regional, or national areas to determine potential sales of a product or service. May gather information on competitors, prices, sales, and methods of marketing and distribution. May use survey results to create a marketing campaign based on regional preferences and buying habits.

*Illustrative Examples: Advertising Analyst, Marketing Consultant, Marketing Forecaster*

**19-3031 Clinical, Counseling and School Psychologists**

Diagnose and treat mental disorders; learning disabilities; and cognitive, behavioral, and emotional problems using individual, child, family, and group therapies. May design and implement behavior modification programs.

*Illustrative Examples: Vocational Psychologist, Child Psychologist*

**19-3051 Urban and Regional Planners**

Develop comprehensive plans and programs for use of land and physical facilities of local jurisdictions, such as towns, cities, counties, and metropolitan areas.

*Illustrative Example: City Planner*

**19-3091 Anthropologists and Archeologists**

Study the origin, development, and behavior of humans. May study the way of life, language, or physical characteristics of existing people in various parts of the world. May engage in systematic recovery and examination of material evidence, such as tools or pottery remaining from past human cultures, in order to determine the history, customs, and living habits of earlier civilizations.

*Illustrative Example: Political Anthropologist*

**19-3093 Historians**

Research, analyze, record, and interpret the past as recorded in sources, such as government and institutional records, newspapers and other periodicals, photographs, interviews, films, and unpublished manuscripts, such as personal diaries and letters.

*Illustrative Examples: Genealogist, Historical Society Director*

**19-4021 Biological Technicians**

Assist biological and medical scientists in laboratories. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.

*Illustrative Examples: Biotechnologist, Wildlife Technician Specimen Technician*

**19-4031 Chemical Technicians**

(Assayer) Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for purposes, such as research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.

*Illustrative Examples: Fiber Analyst, Paint Tester*

**19-4041 Geological and Petroleum Technicians**

Assist scientists in the use of electrical, sonic, or nuclear measuring instruments in both laboratory and production activities to obtain data indicating potential sources of metallic ore, gas, or petroleum. Analyze mud and drill cuttings. Chart pressure, temperature, and other characteristics of wells or bore holes. Investigate and collect information leading to the possible discovery of new oil fields.

*Illustrative Examples: Field Scout, Crude Tester, Seismic Observer*

**19-4091 Environmental Science and Protection Technicians, Including Health**

Performs laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health. Under direction of an environmental scientist or specialist, may collect samples of gases, soil, water, and other materials for testing and take corrective actions as assigned.

*Illustrative Example: Pollution Control Technician*



**19-4093 Forest and Conservation Technicians**

Compile data pertaining to size, content, condition, and other characteristics of forest tracts, under direction of foresters, train and lead forest workers in forest propagation, fire prevention and suppression. May assist conservation scientists in managing, improving, and protecting rangelands and wildlife habitats, and help provide technical assistance regarding the conservation of soil, water, and related natural resources.

*Illustrative Examples: Grazing Examiner, Soil Tester, Tree Warden*

**Community and Social Service Occupations****21-1011 Substance Abuse and Behavioral Disorder Counselors**

Counsel and advise individuals with alcohol, tobacco, drug, or other problems, such as gambling and eating disorders. May counsel individuals, families, or groups or engage in prevention programs. Exclude "Social Workers" (21-1021 through 21-1029), "Psychologists" (19-3031 through 19-3039), and "Mental Health Counselors" (21-1014) providing these services.

*Illustrative Examples: Addiction Counselor, Chemical Dependency Counselor, Drug Counselor*

**21-1012 Educational, Vocational and School Counselors**

Counsel individuals and provide group educational and vocational guidance services.

*Illustrative Examples: Curriculum Counselor, Guidance Counselor, Educational Adviser*

**21-1013 Marriage and Family Therapists**

(Marriage Counselor) Diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Apply psychotherapeutic and family systems theories and techniques in the delivery of professional services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders. Exclude "Social Workers" (21-1021 through 21-1029) and "Psychologists" of all types (19-3031 through 19-3039).

*Illustrative Example: Family Counselor*

**21-1014 Mental Health Counselors**

Counsel with emphasis on prevention. Work with individuals and groups to promote optimum mental health. May help individuals deal with addictions and substance abuse; family, parenting, and marital problems; suicide; stress management; problems with self-esteem; and issues associated with aging and mental and emotional health. Exclude "Social Workers" (21-1021 through 21-1029), "Psychiatrists" (29-1066), and "Psychologists" (19-3031 through 19-3039).

**21-1015 Rehabilitation Counselors**

Counsel individuals to maximize the independence and employability of persons coping with personal, social, and vocational difficulties that result from birth defects, illness, disease, accidents, or the stress of daily life. Coordinate activities for residents of care and treatment facilities. Assess client needs and design and implement rehabilitation programs that may include personal and vocational counseling, training, and job placement.

*Illustrative Examples: Coordinator of Rehabilitation Services, Homemaking Rehabilitation Consultant*

**21-1021 Child, Family and School Social Workers**

Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist single parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers on how to deal with problem children.

*Illustrative Examples: Adoption Agent, Child Abuse Worker, Foster Care Worker*

**21-1022 Medical and Public Health Social Workers**

Provide persons, families, or vulnerable populations with the psychosocial support needed to cope with chronic, acute, or terminal illnesses, such as Alzheimer's, cancer, or AIDS. Services include advising family caregivers, providing patient education and counseling, and making necessary referrals for other social services.

*Illustrative Examples: Bereavement Counselor, Hospice Social Worker, Medical Caseworker*

**21-1023 Mental Health and Substance Abuse Social Workers**

Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education.

*Illustrative Examples: Community Mental Health Worker, Psychiatric Social Worker*

**21-1091 Health Educators**

Promote, maintain, and improve individual and community health by assisting individuals and communities to adopt healthy behaviors. Collect and analyze data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies and environments. May also serve as a resource to assist individuals, other professionals, or the community, and may administer fiscal resources for health education programs.

*Illustrative Examples: Public Health Advisor, Public Health Representative*

**21-1092 Probation Officers and Correctional Treatment Specialists**

Provide social services to assist in rehabilitation of law offenders in custody or on probation or parole. Make recommendations for actions involving formulation of rehabilitation plan and treatment of offender, including conditional release and education and employment stipulations.

*Illustrative Examples: Attendance Officer, Parole Officer*

**21-1093 Social and Human Service Assistants**

Assist professionals from a wide variety of fields, such as psychology, rehabilitation, or social work, to provide client services, as well as support for families. May assist clients in identifying available benefits and social and community services and help clients obtain them. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or adult day care. Exclude "Rehabilitation Counselors" (21-1015), "Personal and Home Care Aides" (39-9021), "Eligibility Interviewers, Government Programs" (43-4061), and "Psychiatric Technicians" (29-2053).

*Illustrative Examples: Case Aide, Home Visitor, Human Services Worker*

**21-2011 Clergy**

Conduct religious worship and perform other spiritual functions associated with beliefs and practices of religious faith or denomination. Provide spiritual and moral guidance and assistance to members.

*Illustrative Examples: Bishop, Parish Priest, Rabbi*

**21-2021 Directors, Religious Activities and Education**

Direct and coordinate activities of a denominational group to meet religious needs of students. Plan, direct, or coordinate church school programs designed to promote religious education among church membership. May provide counseling and guidance relative to marital, health, financial, and religious problems.

*Illustrative Examples: Director of Religious Education, Minister of Education, Youth Director*

## Legal Occupations

**23-1011 Lawyers**

Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, and manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.

*Illustrative Examples: Attorney, Real Estate Attorney, Corporate Counsel*

**23-1021 Administrative Law Judges, Adjudicators and Hearing Officers**

Conduct hearings to decide or recommend decisions on claims concerning government programs or other government-related matters and prepare decisions. Determine penalties or the existence and the amount of liability, or recommend the acceptance or rejection of claims, or compromise settlements.

*Illustrative Examples: Adjudicator, Traffic Court Referee*

**23-1022 Arbitrators, Mediators and Conciliators**

(Ombudsman) Facilitate negotiation and conflict resolution through dialogue. Resolve conflicts outside of the court system by mutual consent of parties involved.

**23-1023 Judges, Magistrate Judges and Magistrates**

Arbitrate, advise, adjudicate, or administer justice in a court of law. May sentence defendant in criminal cases according to government statutes. May determine liability of defendant in civil cases. May issue marriage licenses and perform wedding ceremonies.

*Illustrative Examples: Circuit Court Judge, Jurist, Justice*

**23-2011 Paralegals and Legal Assistants**

Assist lawyers by researching legal precedent, investigating facts, or preparing legal documents. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.

*Illustrative Examples: Legal Assistant, Legal Investigator*

**23-2091 Court Reporters**

Use verbatim methods and equipment to capture, store, retrieve, and transcribe pretrial and trial proceedings or other information. Include stenocaptioners who operate computerized stenographic captioning equipment to provide captions of live or prerecorded broadcasts for hearing-impaired viewers.

*Illustrative Examples: Court Transcriber, Stenocaptioner, Mask Reporter*

**23-2092 Law Clerks**

Assist lawyers or judges by researching or preparing legal documents. May meet with clients or assist lawyers and judges in court. Exclude "Lawyers" (23-1011) and "Paralegals and Legal Assistants" (23-2011).

*Illustrative Example: Legal Clerk*

**23-2093 Title Examiners, Abstractors and Searchers**

Search real estate records, examine titles, or summarize pertinent legal or insurance details for a variety of purposes. May compile lists of mortgages, contracts, and other instruments pertaining to titles by searching public and private records for law firms, real estate agencies, or title insurance companies.

*Illustrative Examples: Abstract Clerk, Escrow Officer, Lien Searcher*

## **Education, Training and Library Occupations**

**25-1011 Business Teachers, Postsecondary**

Teach courses in business administration and management, such as accounting, finance, human resources, labor relations, marketing, and operations research. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Accounting Teacher, Marketing Teacher, Shorthand Teacher*

**25-1021 Computer Science Teachers, Postsecondary**

Teach courses in computer science. May specialize in a field of computer science, such as the design and function of computers or operations and research analysis. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

**25-1022 Mathematical Science Teachers, Postsecondary**

Teach courses pertaining to mathematical concepts, statistics, and actuarial science and to the application of original and standardized mathematical techniques in solving specific problems and situations. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Actuarial Science Teacher, Calculus Teacher, Geometry Teacher*

**25-1032 Engineering Teachers, Postsecondary**

Teach courses pertaining to the application of physical laws and principles of engineering for the development of machines, materials, instruments, processes, and services. Include teachers of subjects, such as chemical, civil, electrical, industrial, mechanical, mineral, and petroleum engineering. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research. Exclude "Computer Science Teachers, Postsecondary" (25-1021).

*Illustrative Examples: Aeronautics Engineering Teacher, Civil Engineering Teacher, Electrical Engineering Teacher*

**25-1042 Biological Science Teachers, Postsecondary**

Teach courses in biological sciences. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Bacteriology Teacher, Biochemistry Teacher, Genetics Teacher*

**25-1052 Chemistry Teachers, Postsecondary**

Teach courses pertaining to the chemical and physical properties and compositional changes of substances. Work may include instruction in the methods of qualitative and quantitative chemical analysis. Include both teachers primarily engaged in teaching, and those who do a combination of both teaching and research. Exclude "Biological Science Teachers, Postsecondary" (25-1042) who teach biochemistry.

*Illustrative Examples: Food Technology Teacher, Pharmacognosy Teacher*

**25-1066 Psychology Teachers, Postsecondary**

Teach courses in psychology, such as child, clinical, and developmental psychology, and psychological counseling. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Child Development Teacher, Human Relations Teacher, Applied Psychology Teacher*

**25-1067 Sociology Teachers, Postsecondary**

Teach courses in sociology. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

**25-1071 Health Specialties Teachers, Postsecondary**

Teach courses in health specialties, such as veterinary medicine, dentistry, pharmacy, therapy, laboratory technology, and public health. Exclude "Nursing Instructors and Teachers, Postsecondary" (25-1072) and "Biological Science Teachers, Postsecondary" (25-1042) who teach medical science.

*Illustrative Examples: Pharmacology Teacher, Dentistry Teacher, Nutrition Teacher*

**25-1072 Nursing Instructors and Teachers, Postsecondary**

Demonstrate and teach patient care in classroom and clinical units to nursing students. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Registered Nursing Instructor, Practical Nursing Instructor, Nurses Aides Instructors*

**25-1113 Social Work Teachers, Postsecondary**

Teach courses in social work. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

**25-1121 Art, Drama and Music Teachers, Postsecondary**

Teach courses in drama, music, and the arts including fine and applied art, such as painting and sculpture, or design and crafts. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Photography Teacher, Piano Teacher, Music Director*

**25-1122 Communications Teachers, Postsecondary**

Teach courses in communications, such as organizational communications, public relations, radio/television broadcasting, and journalism. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Journalism Teacher, Public Speaking Teacher*

**25-1123 English Language and Literature Teachers, Postsecondary**

Teach courses in English language and literature, including linguistics and comparative literature. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Classics Teacher, Etymology Teacher, Creative Writing Teacher*

**25-1125 History Teachers, Postsecondary**

Teach courses in human history and historiography. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

**25-1126 Philosophy and Religion Teachers, Postsecondary**

Teach courses in philosophy, religion, and theology. Include both teachers primarily engaged in teaching and those who do a combination of both teaching and research.

*Illustrative Examples: Divinity Teacher, Metaphysics Teacher, Theology Teacher*

**25-1194 Vocational Education Teachers, Postsecondary**

Teach or instruct vocational or occupational subjects at the postsecondary level (but at less than the baccalaureate) to students who have graduated or left high school. Include correspondence school instructors; industrial, commercial and government training instructors; and adult education teachers and instructors who prepare persons to operate industrial machinery and equipment and transportation and communications equipment. Teaching may take place in public or private schools whose primary business is education or in a school associated with an organization whose primary business is other than education.

*Illustrative Examples: Real Estate Instructor, Auto Mechanics Teacher, Barbering Teacher*

**25-2011 Preschool Teachers, Except Special Education**

Instruct children (normally up to five years of age) in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility. May be required to hold state certification. Exclude "Child Care Workers" (39-9011) and "Special Education Teachers" (25-2041 through 25-2043).

*Illustrative Examples: Head Start Teacher, Childhood Development Teacher, Nursery School Teacher*

**25-2012 Kindergarten Teachers, Except Special Education**

Teach elemental natural and social science, personal hygiene, music, art, and literature to children from four to six years old. Promote physical, mental, and social development. May be required to hold state certification. Exclude "Special Education Teachers" (25-2041 through 25-2043).

**25-2021 Elementary School Teachers, Except Special Education**

Teach pupils in public or private schools at the elementary level basic academic, social, and other formative skills. Exclude "Special Education Teachers" (25-2041 through 25-2043).

**25-2022 Middle School Teachers, Except Special and Vocational Education**

Teach students in public or private schools in one or more subjects at the middle, intermediate, or junior high level, which falls between elementary and senior high school as defined by applicable state laws and regulations. Exclude "Middle School Vocational Education Teachers" (25-2023) and "Special Education Teachers" (25-2041 through 25-2043).

*Illustrative Example: Junior High School Teacher*

**25-2023 Vocational Education Teachers, Middle School**

Teach or instruct vocational or occupational subjects at the middle school level. Exclude "Special Education Teachers" (25-2041 through 25-2043).

**25-2031 Secondary School Teachers, Except Special and Vocational Education**

Instruct students in secondary public or private schools in one or more subjects at the secondary level, such as English, mathematics, or social studies. May be designated according to subject matter specialty, such as typing instructors, commercial teachers, or English teachers. Exclude "Vocational Education Secondary School Teachers" (25-2032) and "Special Education Teachers" (25-2041 through 25-2043).

*Illustrative Example: High School Teacher*

**25-2032 Vocational Education Teachers, Secondary School**

Teach or instruct vocational or occupational subjects at the secondary school level.

**25-2041 Special Education Teachers, Preschool, Kindergarten and Elementary School**

Teach elementary and preschool school subjects to educationally and physically handicapped students. Include teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.

**25-2042 Special Education Teachers, Middle School**

Teach middle school subjects to educationally and physically handicapped students. Include teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.

**25-2043 Special Education Teachers, Secondary School**

Teach secondary school subjects to educationally and physically handicapped students. Include teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills to the mentally impaired.

**25-3011 Adult Literacy, Remedial Education, and GED Teachers and Instructors**

Teach or instruct out-of-school youths and adults in remedial education classes, preparatory classes for the General Educational Development test, literacy, or English as a second language. Teaching may or may not take place in a traditional educational institution.

*Illustrative Example: Adult Education Teacher*

**25-3021 Self-Enrichment Education Teachers**

Teach or instruct courses other than those that normally lead to an occupational objective or degree. Courses may include self-improvement, nonvocational, and nonacademic subjects. Teaching may or may not take place in a traditional educational institution.

*Illustrative Examples: Art Teacher, Flying Teacher, Citizenship Teacher*

**25-4021 Librarians**

Administer libraries and perform related library services. Work in a variety of settings, including public libraries, schools, colleges and universities, museums, corporations, government agencies, law firms, nonprofit organizations, and health care providers. Tasks may include selecting, acquiring, cataloguing, classifying, circulating, and maintaining library materials; and furnishing reference, bibliographical, and readers' advisory services. May perform in-depth, strategic research, and synthesize, analyze, edit, and filter information. May set up or work with databases and information systems to catalogue and access information.

*Illustrative Examples: School Library Media Specialist, Circulation Manager*

**25-4031 Library Technicians**

Assist librarians by helping readers in the use of library catalogs, databases, and indexes to locate books and other materials; and by answering questions that require only brief consultation of standard reference. Compile records; sort and shelf books; remove or repair damaged books; register patrons; check materials in and out of the circulation process. Replace materials in shelving area (stacks) or files. Include bookmobile drivers who operate bookmobiles or light trucks that pull trailers to specific locations on a predetermined schedule and assist with providing services in mobile libraries.

*Illustrative Examples: Assistant Librarian, Bookmobile Driver*

**25-9021 Farm and Home Management Advisors**

Advise, instruct, and assist individuals and families engaged in agriculture, agricultural-related processes, or home economics activities. Demonstrate procedures and apply research findings to solve problems; instruct and train in product development, sales, and the utilization of machinery and equipment to promote general welfare. Include county agricultural agents, feed and farm management advisers, home economists, and extension service advisors.

*Illustrative Examples: Agricultural Extension Agent, Feed Adviser, Home Economic Extension Worker*

**25-9031 Instructional Coordinators**

Develop instructional material, coordinate educational content, and incorporate current technology in specialized fields that provide guidelines to educators and instructors for developing curricula and conducting courses. Include educational consultants and specialists, and instructional material directors.

*Illustrative Examples: Curriculum Specialist, Director of Instructional Materials, Educational Consultant*

**25-9041 Teacher Assistants**

Perform duties that are instructional in nature or deliver direct services to students or parents. Serve in a position for which a teacher or another professional has ultimate responsibility for the design and implementation of educational programs and services.

*Illustrative Examples: Examination Proctor, Paper Grader, Paraprofessional Teacher Aides*

**Arts, Design, Entertainment, Sports and Media Occupations****27-1014 Multimedia Artists and Animators**

Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials.

*Illustrative Examples: Computer Artist, Computer Graphics Illustrator, Special Effects Specialist*

**27-1021 Commercial and Industrial Designers**

Develop and design manufactured products, such as cars, home appliances, and children's toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.

*Illustrative Examples: Body Stylist, Color Consultant, Jewelry Designer*

**27-1023 Floral Designers**

Design, cut, and arrange live, dried, or artificial flowers and foliage.

*Illustrative Examples: Corsage Maker, Florist, Flower Arranger*

**27-1024 Graphic Designers**

Design or create graphics to meet a client's specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.

*Illustrative Examples: Catalogue Illustrator, Graphic Artist, Layout Artist*

**27-1025 Interior Designers**

Plan, design, and furnish interiors of residential, commercial, or industrial buildings. Formulate design which is practical, aesthetic, and conducive to intended purposes, such as raising productivity, selling merchandise, or improving lifestyle. May specialize in a particular field, style, or phase of interior design. Exclude "Merchandise Displayers and Window Trimmers" (27-1026).

*Illustrative Examples: Decorator, Furniture Arranger, Home Lighting Adviser*

**27-1026 Merchandise Displayers and Window Trimmers**

Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.

*Illustrative Examples: Mannequin Decorator, Display Artist, Model Dresser*

**27-1027 Set and Exhibit Designers**

Design special exhibits and movie, television, and theater sets. May study scripts, confer with directors, and conduct research to determine appropriate architectural styles.

*Illustrative Examples: Set Decorator, Stage Scenery Designer*

**27-2012 Producers and Directors**

Produce or direct stage, television, radio, video, or motion picture productions for entertainment, information, or instruction. Responsible for creative decisions, such as interpretation of script, choice of guests, set design, sound, special effects, and choreography.

*Illustrative Examples: Independent Filmmaker, Stage Manager, Program Arranger*

**27-2022 Coaches and Scouts**

Instruct or coach groups or individuals in the fundamentals of sports. Demonstrate techniques and methods of participation. May evaluate athletes' strengths and weaknesses as possible recruits or to improve the athletes' technique to prepare them for competition. Those required to hold teaching degrees should be reported in the appropriate teaching category. Exclude "Athletic Trainers" (29-9091).

*Illustrative Examples: Boxing Trainer, Horse Trainer, Baseball Club Manager*

**27-2042 Musicians and Singers**

Play one or more musical instruments or entertain by singing songs in recital, in accompaniment, or as a member of an orchestra, band, or other musical group. Musical performers may entertain on stage, radio, TV, film, video, or record in studios. Exclude "Dancers" (27-2031).

*Illustrative Examples: Cantor, Church Organist, Instrumentalist*

**27-3031 Public Relations Specialists**

Engage in promoting or creating goodwill for individuals, groups, or organizations by writing or selecting favorable publicity material and releasing it through various communications media. May prepare and arrange displays, and make speeches.

*Illustrative Examples: Lobbyist, Press Secretary, Publicist*

**27-3041 Editors**

Perform variety of editorial duties, such as laying out, indexing, and revising content of written materials, in preparation for final publication. Include technical editors.

*Illustrative Examples: Copy Editor, Censor, Reviewer*

**27-3042 Technical Writers**

Write technical materials, such as equipment manuals, appendices, or operating and maintenance instructions. May assist in layout work.

*Illustrative Examples: Documentation Writer, Assembly Instructions Writer, Specifications Writer*

**27-3043 Writers and Authors**

Originate and prepare written material, such as scripts, stories, advertisements, and other material. Exclude "Public Relations Specialists" (27-3031) and "Technical Writers" (27-3042).

*Illustrative Examples: Crossword Puzzle Maker, Copywriter, Playwright*

**27-3091 Interpreters and Translators**

Translate or interpret written, oral, or sign language text into another language for others.

*Illustrative Examples: Braille Translator, Deaf Interpreter, Language Translator*

**27-4011 Audio and Video Equipment Technicians**

Set up or set up and operate audio and video equipment including microphones, sound speakers, video screens, projectors, video monitors, recording equipment, connecting wires and cables, sound and mixing boards, and related electronic equipment for concerts, sports events, meetings and conventions, presentations, and news conferences. May also set up and operate associated spotlights and other custom lighting systems. Exclude "Sound Engineering Technicians" (27-4014).

*Illustrative Examples: Video Control Operator, Audiovisual Production Specialist*

**27-4012 Broadcast Technicians**

Set up, operate, and maintain the electronic equipment used to transmit radio and television programs. Control audio equipment to regulate volume level and quality of sound during radio and television broadcasts. Operate radio transmitter to broadcast radio and television programs.

*Illustrative Examples: Control Room Technician, Audio Engineer*

**27-4021 Photographers**

Photograph persons, subjects, merchandise, or other commercial products. May develop negatives and produce finished prints. Include scientific photographers, aerial photographers, and photojournalists.

*Illustrative Examples: Camera Operator, Photojournalist*

**27-4031 Camera Operators, Television, Video and Motion Picture**

Operate television, video, or motion picture camera to photograph images or scenes for various purposes, such as TV broadcasts, advertising, video production, or motion pictures.

*Illustrative Example: Cinematographer*

**27-4032 Film and Video Editors**

Edit motion picture soundtracks, film, and video.

*Illustrative Examples: Cue Selector, Videotape Duplicator*

## **Health Care Practitioners and Technical Occupations**

**29-1011 Chiropractors**

Adjust spinal column and other articulations of the body to correct abnormalities of the human body believed to be caused by interference with the nervous system. Examine patient to determine nature and extent of disorder. Manipulate spine or other involved area. May utilize supplementary measures, such as exercise, rest, water, light, heat, and nutritional therapy.

**29-1031 Dietitians and Nutritionists**

Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease. May supervise activities of a department providing quantity food services, counsel individuals, or conduct nutritional research.

*Illustrative Examples: Public Health Dietitian, Nutrition Director, Research Dietitian*

**29-1041 Optometrists**

Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions.

*Illustrative Example: Doctor of Optometry*

**29-1051 Pharmacists**

Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

*Illustrative Examples: Apothecary, Druggist, Industrial Pharmacist*

**29-1061 Anesthesiologists**

Administer anesthetics during surgery or other medical procedures.

**29-1062 Family and General Practitioners**

Diagnose, treat, and help prevent diseases and injuries that commonly occur in the general population.

**29-1063 Internists, General**

Diagnose and provide nonsurgical treatment of diseases and injuries of internal organ systems. Provide care mainly for adults who have a wide range of problems associated with the internal organs. Include subspecialists, such as cardiologists and gastroenterologists, with "All Other Physicians" (29-1069).

**29-1067 Surgeons**

Treat diseases, injuries, and deformities by invasive methods, such as manual manipulation or by using instruments and appliances.

*Illustrative Examples: Orthopedic Surgeon, Cardiovascular Surgeon, Plastic Surgeon*

**29-1071 Physician Assistants**

Provide health care services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants. Exclude "Emergency Medical Technicians and Paramedics" (29-2041), "Medical Assistants" (31-9092), and "Registered Nurses" (29-1111).

*Illustrative Example: Anesthesiologist Assistant*



**29-1111 Registered Nurses**

Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required. Include advance practice nurses such as: nurse practitioners, clinical nurse specialists, certified nurse midwives, and certified registered nurse anesthetists. Advanced practice nursing is practiced by RNs who have specialized formal, post-basic education and who function in highly autonomous and specialized roles.

*Illustrative Examples: Nursing Supervisor, Nurse Midwife, Nurse Practitioner*

**29-1122 Occupational Therapists**

Assess, plan, organize, and participate in rehabilitative programs that help restore vocational, homemaking, and daily living skills, as well as general independence, to disabled persons.

**29-1123 Physical Therapists**

Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and decrease or prevent deformity of patients suffering from disease or injury.

*Illustrative Examples: Physiotherapist, Pulmonary Physical Therapist*

**29-1124 Radiation Therapists**

Provide radiation therapy to patients as prescribed by a radiologist according to established practices and standards. Duties may include reviewing prescription and diagnosis; acting as liaison with physician and supportive care personnel; preparing equipment, such as immobilization, treatment, and protection devices; and maintaining records, reports, and files. May assist in dosimetry procedures and tumor localization.

*Illustrative Examples: Dosimetrist, Radiation Therapy Technologist*

**29-1125 Recreational Therapists**

Plan, direct or coordinate medically-approved recreation programs for patients in hospitals, nursing homes or other institutions. Activities include sports, trips, dramatics, social activities, and arts and crafts. May assess a patient condition and recommend appropriate recreational activity.

*Illustrative Example: Therapeutic Recreation Specialist*

**29-1126 Respiratory Therapists**

Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

*Illustrative Examples: Inhalation Therapist, Respiratory Care Practitioner, Oxygen Therapist*

**29-1127 Speech-Language Pathologists**

Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.

*Illustrative Examples: Oral Therapist, Speech Clinician, Speech Therapist*

**29-1131 Veterinarians**

Diagnose and treat diseases and dysfunctions of animals. May engage in a particular function, such as research and development, consultation, administration, technical writing, sale or production of commercial products, or rendering of technical services to commercial firms or other organizations. Include veterinarians who inspect livestock.

*Illustrative Examples: Animal Pathologist, Animal Surgeon, Veterinary Bacteriologist*

**29-2011 Medical and Clinical Laboratory Technologists**

Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.

*Illustrative Examples: Blood Bank Technologist, Cytotechnologist, Immunohematologist*

**29-2012 Medical and Clinical Laboratory Technicians**

Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.

*Illustrative Examples: Blood Bank Technician, Cytotechnician, Serology Technician*

**29-2021 Dental Hygienists**

Clean teeth and examine oral areas, head, and neck for signs of oral disease. May educate patients on oral hygiene, take and develop X-rays, or apply fluoride or sealants.

*Illustrative Example: Oral Hygienist*

**29-2031 Cardiovascular Technologists and Technicians**

Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary functions, lung capacity, and similar tests. Include vascular technologists.

*Illustrative Examples: Cardiographer, Cardiopulmonary Technologist, E.K.G. Technician*

**29-2032 Diagnostic Medical Sonographers**

Produce ultrasonic recordings of internal organs for use by physicians.

*Illustrative Examples: Ultrasonic Tester, Ultrasound Technologist*

**29-2033 Nuclear Medicine Technologists**

Prepare, administer, and measure radioactive isotopes in therapeutic, diagnostic, and tracer studies utilizing a variety of radioisotope equipment. Prepare stock solutions of radioactive materials and calculate doses to be administered by radiologists. Subject patients to radiation. Execute blood volume, red cell survival, and fat absorption studies following standard laboratory techniques.

*Illustrative Example: Radioisotope Technician*

**29-2034 Radiologic Technologists and Technicians**

Take X-rays and CAT scans or administer nonradioactive materials into patient's bloodstream for diagnostic purposes. Include technologists who specialize in other modalities, such as computed tomography and magnetic resonance. Include workers whose primary duties are to demonstrate portions of the human body on X-ray film or fluoroscopic screen.

*Illustrative Examples: CAT Scan Operator, Skiagrapher, X-ray Technician*

**29-2041 Emergency Medical Technicians and Paramedics**

Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.

*Illustrative Example: E.M.T.*

**29-2052 Pharmacy Technicians**

Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications.

**29-2054 Respiratory Therapy Technicians**

Provide specific, well-defined respiratory care procedures under the direction of respiratory therapists and physicians.

*Illustrative Example: Oxygen Therapy Technician*

**29-2055 Surgical Technologists**

Assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. May help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.

*Illustrative Examples: Operating Room Technician, Scrub Technician, Surgical Orderly*

**29-2056 Veterinary Technologists and Technicians**

Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests, such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines.

*Illustrative Examples: Animal Technician, Veterinary X-ray Operator*

**29-2061 Licensed Practical and Licensed Vocational Nurses**

Care for ill, injured, convalescent, or disabled persons in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.

*Illustrative Example: Licensed Attendant*

**29-2071 Medical Records and Health Information Technicians**

Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. Process, maintain, compile, and report patient information for health requirements and standards.

*Illustrative Examples: Disability Rater, Medical Records Specialist, Medical Library Historian*

**29-2081 Opticians, Dispensing**

Design, measure, fit, and adapt lenses and frames for client according to written optical prescription or specification. Assist client with selecting frames. Measure customer for size of eyeglasses and coordinate frames with facial and eye measurements and optical prescription. Prepare work order for optical laboratory containing instructions for grinding and mounting lenses in frames. Verify exactness of finished lens spectacles. Adjust frame and lens position to fit client. May shape or reshape frames. Include contact lens opticians.

*Illustrative Examples: Contact Lens Fitter, Eyeglass Fitter*

**29-9091 Athletic Trainers**

Evaluate, advise, and treat athletes to assist recovery from injury, avoid injury, or maintain peak physical fitness.

## **Health Care Support Occupations**

**31-1011 Home Health Aides**

Provide routine, personal health care, such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons in the home of patients or in a residential care facility.

*Illustrative Example: Home Attendant*

**31-1012 Nursing Aides, Orderlies and Attendants**

Provide basic patient care under direction of nursing staff. Perform duties, such as feed, bathe, dress, groom, or move patients, or change linens. Exclude "Home Health Aides" (31-1011) and "Psychiatric Aides" (31-1013).

*Illustrative Examples: Certified Nursing Assistant, Hospital Aide, Infirmary Attendant*

**31-1013 Psychiatric Aides**

Assist mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff.

*Illustrative Examples: Charge Attendant, Psychiatric Orderly*

**31-2011 Occupational Therapist Assistants**

Assist occupational therapists in providing occupational therapy treatments and procedures. May, in accordance with state laws, assist in development of treatment plans, carry out routine functions, direct activity programs, and document the progress of treatments. Generally requires formal training.

*Illustrative Example: Occupational Therapy Technician*

**31-2012 Occupational Therapist Aides**

Under close supervision of an occupational therapist or occupational therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing patient and treatment room.

**31-2021 Physical Therapist Assistants**

Assist physical therapists in providing physical therapy treatments and procedures. May, in accordance with state laws, assist in the development of treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments in accordance with patient status and within the scope of treatment plans established by a physical therapist. Generally requires formal training.

*Illustrative Example: Corrective Therapy Assistant*

**31-2022 Physical Therapist Aides**

Under close supervision of a physical therapist or physical therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing the patient and the treatment area.

*Illustrative Example: Physiotherapy Aide*

**31-9011 Massage Therapists**

Massage customers for hygienic or remedial purposes.

*Illustrative Examples: Masseuse, Masseur*

**31-9091 Dental Assistants**

Assist dentist, set up patient and equipment, and keep records.

**31-9092 Medical Assistants**

Perform administrative and certain clinical duties under the direction of physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician. Exclude "Physician Assistants" (29-1071).

*Illustrative Examples: Morgue Attendant, Ophthalmic Aide, Physicians Aide*

**31-9093 Medical Equipment Preparers**

Prepare, sterilize, install, or clean laboratory or health care equipment. May perform routine laboratory tasks and operate or inspect equipment.

*Illustrative Examples: Bandage Maker, Hot Packer, Sterilizer*

**31-9094 Medical Transcriptionists**

Use transcribing machines with headset and foot pedal to listen to recordings by physicians and other health care professionals dictating a variety of medical reports, such as emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate medical jargon and abbreviations into their expanded forms. Edit as necessary and return reports in either printed or electronic form to the dictator for review and signature, or correction.

*Illustrative Example: Medical Stenographer*

**31-9095 Pharmacy Aides**

Record drugs delivered to the pharmacy, store incoming merchandise, and inform the supervisor of stock needs. May operate cash register and accept prescriptions for filling.

*Illustrative Examples: Dispensary Attendant, Prescription Clerk*

**31-9096 Veterinary Assistants and Laboratory Animal Caretakers**

Feed, water, and examine pets and other nonfarm animals for signs of illness, disease, or injury in laboratories and animal hospitals and clinics. Clean and disinfect cages and work areas, and sterilize laboratory and surgical equipment. May provide routine postoperative care, administer medication orally or topically, or prepare samples for laboratory examination under the supervision of veterinary or laboratory animal technologists or technicians, veterinarians, or scientists. Exclude "Nonfarm Animal Caretakers" (39-2021).

**Protective Service Occupations****33-1012 First-Line Supervisors/Managers of Police and Detectives**

Supervise and coordinate activities of members of police force.

*Illustrative Examples: Chief of Police, Precinct Captain*

**33-1021 First-Line Supervisors/Managers of Fire Fighting and Prevention Workers**

Supervise and coordinate activities of workers engaged in fire fighting and fire prevention and control.

*Illustrative Examples: Fire Captain, Fire Chief, Fire Marshal*

**33-2011 Firefighters**

Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk.

Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster management.

*Illustrative Examples: Explosive Ordnance Disposal Technician, Fireboat Operator, Smoke Jumper*

**33-2021 Fire Inspectors and Investigators**

Inspect buildings to detect fire hazards and enforce local ordinances and state laws. Investigate and gather facts to determine cause of fires and explosions.

*Illustrative Example: Arson Investigator*

**33-3011 Bailiffs**

Maintain order in courts of law.

*Illustrative Examples: Court Officer, Sergeant at Arms*

**33-3012 Correctional Officers and Jailers**

Guard inmates in penal or rehabilitative institution in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point. Include deputy sheriffs and police who spend the majority of their time guarding prisoners in correctional institutions.

*Illustrative Examples: Convict Guard, Custodial Officer, Prison Guard*

**33-3021 Detectives and Criminal Investigators**

Conduct investigations related to suspected violations of federal, state, or local laws to prevent or solve crimes.

Exclude "Private Detectives and Investigators" (33-9021).

*Illustrative Examples: Police Inspector, Deputy United States Marshal, Narcotics Agent*

**33-3031 Fish and Game Wardens**

(Wildlife Officer) Patrol assigned area to prevent fish and game law violations. Investigate reports of damage to crops or property by wildlife. Compile biological data.

*Illustrative Examples: State Game Protector, Wildlife Control Agent*

**33-3051 Police and Sheriff's Patrol Officers**

Maintain order, enforce laws and ordinances, and protect life and property in an assigned patrol district. Perform combination of following duties: patrol a specific area on foot or in a vehicle; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts.

*Illustrative Examples: Border Guard, Campus Police, City Constable*

**33-9011 Animal Control Workers**

Handle animals for the purpose of investigations of mistreatment, or control of abandoned, dangerous, or unattended animals.

*Illustrative Examples: Animal Warden, Dogcatcher, Humane Officer*

**33-9021 Private Detectives and Investigators**

Detect occurrences of unlawful acts or infractions of rules in private establishment, or seek, examine, and compile information for client.

*Illustrative Example: House Detective*

**33-9032 Security Guards**

Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules.

*Illustrative Examples: Bodyguard, Bouncer, Watchguard*

**33-9091 Crossing Guards**

Guide or control vehicular or pedestrian traffic at such places as streets, schools, railroad crossings, or construction sites.

*Illustrative Examples: Flagger, Gate Operator, School Patrol*

## **Food Preparation and Serving Related Occupations**

**35-1011 Chefs and Head Cooks**

Direct the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts. May participate in cooking.

*Illustrative Examples: Executive Chef, Pastry Chef, Sous Chef*

**35-1012 First-Line Supervisors/Managers of Food Preparation and Serving Workers**

Supervise workers engaged in preparing and serving food.

*Illustrative Examples: Cafeteria Manager, Caterer, Bar Manager*

**35-2011 Cooks, Fast Food**

Prepare and cook food in a fast-food restaurant with a limited menu. Duties of the cooks are limited to preparation of a few basic items and normally involve operating large-volume single-purpose cooking equipment.

*Illustrative Examples: Fry Cook, Pizza Maker*

**35-2012 Cooks, Institution and Cafeteria**

Prepare and cook large quantities of food for institutions, such as schools, hospitals, or cafeterias.

*Illustrative Examples: Camp Cook, Mess Cook, Galley Cook*

**35-2014 Cooks, Restaurant**

Prepare, season, and cook soups, meats, vegetables, desserts, or other foodstuffs in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.

*Illustrative Examples: Broiler Cook, Specialty Foreign Food Cook, Garde-manger*

**35-2015 Cooks, Short Order**

Prepare and cook to order a variety of foods that require only a short preparation time. May take orders from customers and serve patrons at counters or tables. Exclude "Fast Food Cooks" (35-2011).

*Illustrative Examples: Barbecue Cook, Griddle Cook*

**35-2021 Food Preparation Workers**

Perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.

*Illustrative Examples: Coffee Maker, Kitchen Helper, Sandwich Maker*

**35-3011 Bartenders**

Mix and serve drinks to patrons, directly or through waitstaff.

*Illustrative Examples: Barkeeper, Taproom Attendant*

**35-3021 Combined Food Preparation and Serving Workers, Including Fast Food**

Perform duties which combine both food preparation and food service.

*Illustrative Examples: Caterers Aide, Deli Clerk, Mess Attendant*

**35-3022 Counter Attendants, Cafeteria, Food Concession and Coffee Shop**

Serve food to diners at counter or from a steam table. Include counter attendants who also wait tables with "Waiters and Waitresses" (35-3031).

*Illustrative Examples: Canteen Operator, Snack Bar Attendant, Hot Dog Attendant*

**35-3031 Waiters and Waitresses**

Take orders and serve food and beverages to patrons at tables in dining establishment. Exclude "Counter Attendants, Cafeteria, Food Concession, and Coffee Shop" (35-3022).

*Illustrative Examples: Cocktail Waiter, Wine Steward, Head Waitress*

**35-3041 Food Servers, Nonrestaurant**

Serve food to patrons outside of a restaurant environment, such as in hotels, hospital rooms, or cars. Exclude "Door-to-Door Sales Workers, News and Street Vendors, and Related Workers" (41-9091) and "Counter Attendants, Cafeteria, Food Concession and Coffee Shop" (35-3022).

*Illustrative Examples: Curb Attendant, Hospital Tray-Service Worker, Room Service Clerk*

**35-9011 Dining Room and Cafeteria Attendants and Bartender Helpers**

Facilitate food service. Clean tables, carry dirty dishes, replace soiled table linens; set tables; replenish supply of clean linens, silverware, glassware, and dishes; supply service bar with food, and serve water, butter, and coffee to patrons.

*Illustrative Examples: Busser, Lunchroom Attendant, Tray Setter*

**35-9021 Dishwashers**

Clean dishes, kitchen, food preparation equipment, or utensils.

*Illustrative Examples: Kitchen Cleaner, Glass Washer, Pot Washer*

**35-9031 Hosts and Hostesses, Restaurant, Lounge and Coffee Shop**

Welcome patrons, seat them at tables or in lounge, and help ensure quality of facilities and service.

*Illustrative Examples: Maitre D', Dining Room Host*

## **Building and Grounds Cleaning and Maintenance Occupations**

**37-1011 First-Line Supervisors/Managers of Housekeeping and Janitorial Workers**

Supervise work activities of cleaning personnel in hotels, hospitals, offices, and other establishments.

*Illustrative Examples: Building Superintendent, Household Manager, Housekeeping Supervisor*

**37-1012 First-Line Supervisors/Managers of Landscaping, Lawn Service and Groundskeeping Workers**

Plan, organize, direct, or coordinate activities of workers engaged in landscaping or groundskeeping activities, such as planting and maintaining ornamental trees, shrubs, flowers, and lawns, and applying fertilizers, pesticides, and other chemicals, according to contract specifications. May also coordinate activities of workers engaged in terracing hill-sides, building retaining walls, constructing pathways, installing patios, and similar activities in following a landscape design plan. Work may involve reviewing contracts to ascertain service, machine, and workforce requirements; answering inquiries from potential customers regarding methods, material, and price ranges; and preparing estimates according to labor, material, and machine costs.

*Illustrative Examples: Landscape Contractor, Golf Course Superintendent, Nursery Supervisor*

**37-2011 Janitors and Cleaners, Except Maids and Housekeeping Cleaners**

Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as cleaning floors, shampooing rugs, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs, and cleaning snow or debris from sidewalk.

*Illustrative Examples: Floor Cleaner, Building Custodian, Window Washer*

**37-2012 Maids and Housekeeping Cleaners**

Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels, restaurants, and hospitals, in a clean and orderly manner. Duties include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.

*Illustrative Examples: Bed Maker, Chambermaid, Housekeeper*

**37-2021 Pest Control Workers**

Spray or release chemical solutions or toxic gases and set traps to kill pests and vermin, such as mice, termites, and roaches, that infest buildings and surrounding areas.

*Illustrative Examples: Exterminator, Exterminator Helper, Fumigator*

**37-3011 Landscaping and Groundskeeping Workers**

Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units. Exclude "Farmworkers and Laborers, Crop, Nursery and Greenhouse" (45-2092).

*Illustrative Examples: Landscape Gardener, Outdoor Sprinkler Installer, Greenskeeper*

**37-3012 Pesticide Handlers, Sprayers and Applicators, Vegetation**

Mix or apply pesticides, herbicides, fungicides, or insecticides through sprays, dusts, vapors, soil incorporation or chemical application on trees, shrubs, lawns, or botanical crops. Usually requires specific training and state or federal certification. Exclude "Commercial Pilots" (53-2012) who operate aviation equipment to dust or spray crops.

*Illustrative Examples: Fruit Sprayer, Weed Controller*

## **Personal Care and Service Occupations**

**39-1011 Gaming Supervisors**

Supervise gaming operations and personnel in an assigned area. Circulate among tables and observe operations. Ensure that stations and games are covered for each shift. May explain and interpret operating rules of house to patrons. May plan and organize activities and create friendly atmosphere for guests in hotels/casinos. May adjust service complaints. Exclude "Slot Key Persons" (39-1012).

*Illustrative Examples: Executive Casino Host, Table Games Supervisor, Pit Boss*

**39-1021 First-Line Supervisors/Managers of Personal Service Workers**

Supervise and coordinate activities of personal service workers, such as supervisors of flight attendants, hairdressers, or caddies.

*Illustrative Examples: Caddymaster, Barbershop Manager, Health Club Manager*

**39-3012 Gaming and Sports Book Writers and Runners**

Assist in the operation of games such as keno and bingo. Scan winning tickets presented by patrons, calculate amount of winnings and pay patrons. May operate keno and bingo equipment. May start gaming equipment that randomly selects numbers. May announce number selected until total numbers specified for each game are selected. May pick up tickets from players, collect bets, receive, verify and record patrons' cash wagers.

*Illustrative Examples: Sheet Writer, Keno Writer, Keno Runner*

**39-3021 Motion Picture Projectionists**

Set up and operate motion picture projection and related sound reproduction equipment.

*Illustrative Examples: Chief Projectionist, Film Projector Operator*

**39-3031 Ushers, Lobby Attendants and Ticket Takers**

Assist patrons at entertainment events by performing duties, such as collecting admission tickets and passes from patrons, assisting in finding seats, searching for lost articles, and locating such facilities as rest rooms and telephones.

*Illustrative Examples: Door Attendant, Ticket Collector*

**39-3091 Amusement and Recreation Attendants**

Perform variety of attending duties at amusement or recreation facility. May schedule use of recreation facilities, maintain and provide equipment to participants of sporting events or recreational pursuits, or operate amusement concessions and rides.

*Illustrative Examples: Arcade Attendant, Golf Course Starter, Caddy*

**39-3093 Locker Room, Coatroom and Dressing Room Attendants**

Provide personal items to patrons or customers in locker rooms, dressing rooms, or coatrooms.

*Illustrative Examples: Bathhouse Attendant, Jockey Valet*

**39-4011 Embalmers**

Prepare bodies for interment in conformity with legal requirements.

**39-4021 Funeral Attendants**

Perform variety of tasks during funeral, such as placing casket in parlor or chapel prior to service; arranging floral offerings or lights around casket; directing or escorting mourners; closing casket; and issuing and storing funeral equipment.

*Illustrative Examples: Mortician Helper, Pallbearer*

**39-5011 Barbers**

Provide barbering services, such as cutting, trimming, shampooing, and styling hair, trimming beards, or giving shaves.

*Illustrative Examples: Barber Apprentice, Haircutter*

**39-5012 Hairdressers, Hairstylists and Cosmetologists**

Provide beauty services, such as shampooing, cutting, coloring, and styling hair, and massaging and treating scalp. May also apply makeup, dress wigs, perform hair removal, and provide nail and skin care services.

*Illustrative Examples: Beautician, Wig Stylist, Electrologist*

**39-5092 Manicurists and Pedicurists**

Clean and shape customers' fingernails and toenails. May polish or decorate nails.

*Illustrative Example: Fingernail Sculptor*

**39-6011 Baggage Porters and Bellhops**

Handle baggage for travelers at transportation terminals or for guests at hotels or similar establishments.

*Illustrative Examples: Baggage Handler, Lobby Porter, Skycap*

**39-6021 Tour Guides and Escorts**

Escort individuals or groups on sightseeing tours or through places of interest, such as industrial establishments, public buildings, and art galleries.

*Illustrative Examples: Page, Sightseeing Guide*

**39-6022 Travel Guides**

Plan, organize, and conduct long-distance cruises, tours, and expeditions for individuals and groups.

*Illustrative Examples: Cruise Director, Tour Director*

**39-9011 Child Care Workers**

Attend to children at schools, businesses, private households, and child care institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play. Exclude "Preschool Teachers" (25-2011) and "Teacher Assistants" (25-9041).

*Illustrative Examples: Baby-sitter, Governess, Nanny*

**39-9021 Personal and Home Care Aides**

Assist elderly or disabled adults with daily living activities at the person's home or in a daytime nonresidential facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. May provide meals and supervised activities at nonresidential care facilities. May advise families, the elderly, and disabled on such things as nutrition, cleanliness, and household utilities.

*Illustrative Examples: Blind Escort, Caregiver, Geriatric Aide*

**39-9031 Fitness Trainers and Aerobics Instructors**

Instruct or coach groups or individuals in exercise activities and the fundamentals of sports. Demonstrate techniques and methods of participation. Observe participants and inform them of corrective measures necessary to improve their skills. Those required to hold teaching degrees should be reported in the appropriate teaching category. Exclude "Athletic Trainers" (29-9091).

*Illustrative Examples: Exercise Teacher, Personal Trainer, Yoga Teacher*

**39-9032 Recreation Workers**

Conduct recreation activities with groups in public, private, or volunteer agencies or recreation facilities. Organize and promote activities, such as arts and crafts, sports, games, music, dramatics, social recreation, camping, and hobbies, taking into account the needs and interests of individual members.

*Illustrative Examples: Camp Counselor, Playground Director, Activities Director*

**39-9041 Residential Advisors**

Coordinate activities for residents of boarding schools, college fraternities or sororities, college dormitories, or similar establishments. Order supplies and determine need for maintenance, repairs, and furnishings. May maintain household records and assign rooms. May refer residents to counseling resources if needed.

*Illustrative Examples: Dormitory Supervisor, Houseparent*



## Sales and Related Occupations

### **41-1011 First-Line Supervisors/Managers of Retail Sales Workers**

Directly supervise sales workers in a retail establishment or department. Duties may include management functions, such as purchasing, budgeting, accounting, and personnel work, in addition to supervisory duties.

*Illustrative Examples: Department Manager, Flower Shop Manager, Supervisor of Cashiers*

### **41-1012 First-Line Supervisors/Managers of Non-Retail Sales Workers**

Directly supervise and coordinate activities of sales workers other than retail sales workers. May perform duties, such as budgeting, accounting, and personnel work, in addition to supervisory duties.

*Illustrative Examples: District Sales Manager, Dry-cleaning Manager, Blood-Donor Recruiter Supervisor*

### **41-2011 Cashiers**

Receive and disburse money in establishments other than financial institutions. Usually involves use of electronic scanners, cash registers, or related equipment. Often involved in processing credit or debit card transactions and validating checks.

*Illustrative Examples: Auction Clerk, Toll Collector, Disbursement Clerk*

### **41-2012 Gaming Change Persons and Booth Cashiers**

Exchange coins and tokens for patrons' money. May issue payoffs and obtain customer's signature on receipt when winnings exceed the amount held in the slot machine. May operate a booth in the slot machine area and furnish change persons with money bank at the start of the shift, or count and audit money in drawers.

*Illustrative Examples: Carousel Attendant, Slot Attendant*

### **41-2021 Counter and Rental Clerks**

Receive orders for repairs, rentals, and services. May describe available options, compute cost, and accept payment.

*Illustrative Examples: Airplane Charter Clerk, Car Rental Agent, Skate Shop Attendant*

### **41-2022 Parts Salespersons**

Sell spare and replacement parts and equipment in repair shop or parts store.

*Illustrative Examples: Parts Clerk, Auto Parts Salesperson, Electronic Parts Salesperson*

### **41-2031 Retail Salespersons**

Sell merchandise, such as furniture, motor vehicles, appliances, or apparel in a retail establishment. Exclude "Cashiers" (41-2011).

*Illustrative Examples: Car Dealer, Haberdasher, Wallpaper Salesperson*

### **41-3011 Advertising Sales Agents**

Sell or solicit advertising, including graphic art, advertising space in publications, custom-made signs, or TV and radio advertising time. May obtain leases for outdoor advertising sites or persuade retailer to use sales promotion display items.

*Illustrative Examples: Radio Time Salesperson, Yellow Pages Salesperson, Leasing Agent Outdoor Advertising*

### **41-3021 Insurance Sales Agents**

Sell life, property, casualty, health, automotive, or other types of insurance. May refer clients to independent brokers, work as independent broker, or be employed by an insurance company.

*Illustrative Examples: Insurance Broker, Insurance Solicitor, Pension Agent*

### **41-3031 Securities, Commodities and Financial Services Sales Agents**

Buy and sell securities in investment and trading firms, or call upon businesses and individuals to sell financial services. Provide financial services, such as loan, tax, and securities counseling. May advise securities customers about such things as stocks, bonds, and market conditions.

*Illustrative Examples: Investment Banker, Stockbroker, Stock Trader*

### **41-3041 Travel Agents**

Plan and sell transportation and accommodations for travel agency customers. Determine destination, modes of transportation, travel dates, costs, and accommodations required.

*Illustrative Examples: Travel Consultant, Travel Counselor*

### **41-4011 Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products**

Sell goods for wholesalers or manufacturers where technical or scientific knowledge is required in such areas as biology, engineering, chemistry, and electronics, normally obtained from at least two years of postsecondary education.

*Illustrative Examples: Electronics Sales Representative, Oil Field Equipment Sales Representative, Pharmaceutical Representative*

**41-4012 Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products**

Sell goods for wholesalers or manufacturers to businesses or groups of individuals. Work requires substantial knowledge of items sold.

*Illustrative Examples: Diamond Broker, Oil Distributor, Wool Merchant*

**41-9011 Demonstrators and Product Promoters**

Demonstrate merchandise and answer questions for the purpose of creating public interest in buying the product. May sell demonstrated merchandise.

*Illustrative Examples: Home Demonstrator, Exhibit Display Representative*

**41-9021 Real Estate Brokers**

Operate real estate office, or work for commercial real estate firm, overseeing real estate transactions. Other duties usually include selling real estate or renting properties and arranging loans.

**41-9022 Real Estate Sales Agents**

Rent, buy, or sell property for clients. Perform duties, such as study property listings, interview prospective clients, accompany clients to property site, discuss conditions of sale, and draw up real estate contracts. Include agents who represent buyer.

*Illustrative Examples: Apartment Rental Agent, Land Agent, Right-of-Way Agent*

**41-9031 Sales Engineers**

Sell business goods or services, the selling of which requires a technical background equivalent to a baccalaureate degree in engineering. Exclude "Engineers" (17-2011 through 17-2199) whose primary function is not marketing or sales.

*Illustrative Examples: Aeronautical Products Sales Engineer, Industrial Machinery Sales Engineer, Nuclear Equipment Sales Engineer*

**41-9041 Telemarketers**

Solicit orders for goods or services over the telephone.

*Illustrative Examples: Telephone Salesperson, Telephone Solicitor*

**41-9091 Door-to-Door Sales Workers, News and Street Vendors, and Related Workers**

Sell goods or services door-to-door or on the street.

*Illustrative Examples: Peddler, Direct Selling*

## Office and Administrative Support Occupations

**43-1011 First-Line Supervisors/Managers of Office and Administrative Support Workers**

Supervise and coordinate the activities of clerical and administrative support workers.

*Illustrative Examples: Claims Supervisor, Stockroom Manager, Teller Supervisor*

**43-2011 Switchboard Operators, Including Answering Service**

Operate telephone business systems equipment or switchboards to relay incoming, outgoing, and interoffice calls. May supply information to callers and record messages.

*Illustrative Examples: Communication Center Operator, Exchange Operator, Telephone Answering Service Operator*

**43-3011 Bill and Account Collectors**

Locate and notify customers of delinquent accounts by mail, telephone, or personal visit to solicit payment. Duties include receiving payment and posting amount to customer's account; preparing statements to credit department if customer fails to respond; initiating repossession proceedings or service disconnection; keeping records of collection and status of accounts.

*Illustrative Examples: Payment Collector, Collection Clerk, Installment Agent*

**43-3021 Billing and Posting Clerks and Machine Operators**

Compile, compute, and record billing, accounting, statistical, and other numerical data for billing purposes. Prepare billing invoices for services rendered or for delivery or shipment of goods.

*Illustrative Examples: Calculating Machine Operator, Invoice Control Clerk, Rating Clerk*

**43-3031 Bookkeeping, Accounting and Auditing Clerks**

Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

*Illustrative Examples: Accounts Receivable Clerk, Ledger Clerk, Voucher Examiner*

**43-3051 Payroll and Timekeeping Clerks**

Compile and post employee time and payroll data. May compute employees' time worked, production, and commission. May compute and post wages and deductions. May prepare paychecks.

*Illustrative Examples: Attendance Clerk, Payroll Bookkeeper, Timekeeper*

**43-3061 Procurement Clerks**

Compile information and records to draw up purchase orders for procurement of materials and services.

*Illustrative Examples: Property and Supply Officer, Purchasing Clerk*

**43-3071 Tellers**

Receive and pay out money. Keep records of money and negotiable instruments involved in a financial institution's various transactions.

*Illustrative Examples: Foreign Exchange Clerk, Money Order Clerk, Securities Teller*

**43-4011 Brokerage Clerks**

Perform clerical duties involving the purchase or sale of securities. Duties include writing orders for stock purchases and sales, computing transfer taxes, verifying stock transactions, accepting and delivering securities, tracking stock price fluctuations, computing equity, distributing dividends, and keeping records of daily transactions and holdings.

*Illustrative Examples: Portfolio Assistant, Dividend Clerk, Telephone Quotation Clerk*

**43-4021 Correspondence Clerks**

Compose letters in reply to requests for merchandise, damage claims, credit and other information, delinquent accounts, incorrect billings, or unsatisfactory services. Duties may include gathering data to formulate reply and typing correspondence.

*Illustrative Examples: Collection Correspondent, Fan Mail Editor*

**43-4031 Court, Municipal and License Clerks**

Perform clerical duties in courts of law, municipalities, and governmental licensing agencies and bureaus. May prepare docket of cases to be called; secure information for judges and court; prepare draft agendas or bylaws for town or city council; answer official correspondence; keep fiscal records and accounts; issue licenses or permits; record data, administer tests, or collect fees. Include chief clerks with "Managers, All Other" (11-9199).

*Illustrative Examples: Circuit Court Clerk, Warrant Clerk*

**43-4041 Credit Authorizers, Checkers and Clerks**

Authorize credit charges against customers' accounts. Investigate history and credit standing of individuals or business establishments applying for credit. May interview applicants to obtain personal and financial data; determine credit worthiness; process applications; and notify customers of acceptance or rejection of credit.

*Illustrative Examples: Credit Interviewer, Credit Rating Inspector, Loan Adjuster*

**43-4051 Customer Service Representatives**

Interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints. Exclude individuals whose duties are primarily sales or repair.

*Illustrative Examples: Complaint Adjuster, Passenger Relations Representative, Telephone Service Adviser*

**43-4061 Eligibility Interviewers, Government Programs**

Determine eligibility of persons applying to receive assistance from government programs and agency resources, such as welfare, unemployment benefits, social security, and public housing.

*Illustrative Examples: Unemployment Benefits Claims Taker, County Service Officer, Welfare Interviewer*

**43-4071 File Clerks**

File correspondence, cards, invoices, receipts, and other records in alphabetical or numerical order or according to the filing system used. Locate and remove material from file when requested.

*Illustrative Examples: Computer Tape Librarian, Document Clerk, Records Custodian*

**43-4081 Hotel, Motel and Resort Desk Clerks**

Accommodate hotel, motel, and resort patrons by registering and assigning rooms to guests, issuing room keys, transmitting and receiving messages, keeping records of occupied rooms and guests' accounts, making and confirming reservations, and presenting statements to and collecting payments from departing guests.

*Illustrative Examples: Register Clerk, Room Clerk*

**43-4121 Library Assistants, Clerical**

Compile records, sort and shelve books, and issue and receive library materials such as pictures, cards, slides and microfilm. Locate library materials for loan and replace material in shelving area, stacks, or files according to identification number and title. Register patrons to permit them to borrow books, periodicals, and other library materials.

*Illustrative Examples: Braille and Talking Books Clerk, Circulation Clerk, Microfilm Clerk*

**43-4131 Loan Interviewers and Clerks**

Interview loan applicants to elicit information; investigate applicants' backgrounds and verify references; prepare loan request papers; and forward findings, reports, and documents to appraisal department. Review loan papers to ensure completeness, and complete transactions between loan establishment, borrowers, and sellers upon approval of loan.

*Illustrative Examples: Loan Closer, Loan Processor, Mortgage Clerk*

**43-4141 New Accounts Clerks**

Interview persons desiring to open bank accounts. Explain banking services available to prospective customers and assist them in preparing application form.

*Illustrative Example: Banking Services Clerk*

**43-4151 Order Clerks**

Receive and process incoming orders for materials, merchandise, classified ads, or services such as repairs, installations, or rental of facilities. Duties include informing customers of receipt, prices, shipping dates, and delays; preparing contracts; and handling complaints. Exclude "Dispatchers, Except Police, Fire, and Ambulance" (43-5032) who both dispatch and take orders for services.

*Illustrative Examples: Catalogue Clerk, Subscription Clerk, Classified Advertisement Clerk*

**43-4161 Human Resources Assistants, Except Payroll and Timekeeping**

Compile and keep personnel records. Record data for each employee, such as address, weekly earnings, absences, amount of sales or production, supervisory reports on ability, and date of and reason for termination. Compile and type reports from employment records. File employment records. Search employee files and furnish information to authorized persons.

*Illustrative Example: Personnel Clerk*

**43-4171 Receptionists and Information Clerks**

Answer inquiries and obtain information for general public, customers, visitors, and other interested parties. Provide information regarding activities conducted at establishment; location of departments, offices, and employees within organization. Exclude "Switchboard Operators, Including Answering Service" (43-2011).

*Illustrative Examples: Appointment Clerk, Front Desk Clerk, Referral and Information Aide*

**43-4181 Reservation and Transportation Ticket Agents and Travel Clerks**

Make and confirm reservations and sell tickets to passengers and for large hotel or motel chains. May check baggage and direct passengers to designated concourse, pier, or track; make reservations, deliver tickets, arrange for visas, contact individuals and groups to inform them of package tours, or provide tourists with travel information, such as points of interest, restaurants, rates, and emergency service. Exclude "Travel Agents" (41-3041), "Hotel, Motel and Resort Desk Clerks" (43-4081), and "Cashiers" (41-2011) who sell tickets for local transportation.

*Illustrative Examples: Ticket Clerk, Hotel Reservationist, Gate Agent*

**43-5011 Cargo and Freight Agents**

Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals, and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery to loading platform. Prepare and examine bills of lading to determine shipping charges and tariffs.

*Illustrative Examples: Routing Agent, Shipping Agent*

**43-5021 Couriers and Messengers**

Pick up and carry messages, documents, packages, and other items between offices or departments within an establishment or to other business concerns, traveling by foot, bicycle, motorcycle, automobile, or public conveyance. Exclude "Truck Drivers, Light or Delivery Services" (53-3033).

*Illustrative Examples: Message Delivery Clerk, Telegraph Messenger*

**43-5031 Police, Fire and Ambulance Dispatchers**

Receive complaints from public concerning crimes and police emergencies. Broadcast orders to police patrol units in vicinity of complaint to investigate. Operate radio, telephone, or computer equipment to receive reports of fires and medical emergencies and relay information or orders to proper officials.

*Illustrative Examples: 911 Operator, Emergency Operator, Public Safety Dispatcher*

**43-5032 Dispatchers, Except Police, Fire and Ambulance**

Schedule and dispatch workers, work crews, equipment, or service vehicles for conveyance of materials, freight, or passengers, or for normal installation, service, or emergency repairs rendered outside the place of business. Duties may include using radio, telephone, or computer to transmit assignments and compiling statistics and reports on work progress.

*Illustrative Examples: Security Dispatcher, Repair Service Dispatcher, Taxicab Dispatcher*

**43-5041 Meter Readers, Utilities**

Read meter and record consumption of electricity, gas, water, or steam.

*Illustrative Examples: Electric Meter Reader, Meter Record Clerk, Water Meter Reader*

**43-5051 Postal Service Clerks**

Perform any combination of tasks in a post office, such as receive letters and parcels; sell postage and revenue stamps, postal cards, and stamped envelopes; fill out and sell money orders; place mail in pigeon holes of mail rack or in bags according to state, address, or other scheme; and examine mail for correct postage.

*Illustrative Examples: Parcel Post Clerk, Special Delivery Clerk, Stamp Clerk*

**43-5052 Postal Service Mail Carriers**

Sort mail for delivery. Deliver mail on established route by vehicle or on foot.

*Illustrative Examples: Letter Carrier, Mail Deliverer, Route Carrier*

**43-5053 Postal Service Mail Sorters, Processors and Processing Machine Operators**

Prepare incoming and outgoing mail for distribution. Examine, sort, and route mail by state, type of mail, or other scheme. Load, operate, and occasionally adjust and repair mail processing, sorting, and canceling machinery. Keep records of shipments, pouches, and sacks; and other duties related to mail handling within the postal service. Must complete a competitive exam. Exclude "Postal Service Clerks" (43-5051) and "Postal Service Mail Carriers" (43-5052).

*Illustrative Examples: Mail Weigher, Mail Handler Sorting Mail*

**43-5061 Production, Planning and Expediting Clerks**

Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties include reviewing and distributing production, work, and shipment schedules; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work, inventory levels, costs, and production problems. Exclude "Weighers, Measurers, Checkers and Samplers, Recordkeeping" (43-5111).

*Illustrative Examples: Assignment Agent, Production Dispatcher, Expediter*

**43-5071 Shipping, Receiving and Traffic Clerks**

Verify and keep records on incoming and outgoing shipments. Prepare items for shipment. Duties include assembling, addressing, stamping, and shipping merchandise or material; receiving, unpacking, verifying and recording incoming merchandise or material; and arranging for the transportation of products. Exclude "Stock Clerks and Order Fillers" (43-5081) and "Weighers, Measurers, Checkers and Samplers, Recordkeeping" (43-5111).

*Illustrative Examples: Receiver, Garment Sorter, Freight Separator*

**43-5081 Stock Clerks and Order Fillers**

Receive, store, and issue sales floor merchandise, materials, equipment, and other items from stockroom, warehouse, or storage yard to fill shelves, racks, tables, or customers' orders. May mark prices on merchandise and set up sales displays. Exclude "Laborers and Freight, Stock and Material Movers, Hand" (53-7062), and "Shipping, Receiving and Traffic Clerks" (43-5071).

*Illustrative Examples: Inventory Control Clerk, Tool Crib Attendant, Warehouse Clerk*

**43-5111 Weighers, Measurers, Checkers and Samplers, Recordkeeping**

Weigh, measure, and check materials, supplies, and equipment for the purpose of keeping relevant records. Duties are primarily clerical by nature. Include workers who collect and keep record of samples of products or materials.

Exclude production "Inspectors, Testers, Sorters, Samplers and Weighers" (51-9061).

*Illustrative Examples: Counter, Inventory Checker, Scale Attendant*

**43-6011 Executive Secretaries and Administrative Assistants**

Provide high-level administrative support by conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings. May also train and supervise lower-level clerical staff. Exclude "Secretaries" (43-6012 through 43-6014).

**43-6012 Legal Secretaries**

Perform secretarial duties utilizing legal terminology, procedures, and documents. Prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. May also assist with legal research.

**43-6013 Medical Secretaries**

Perform secretarial duties utilizing specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.

*Illustrative Examples: Psychiatric Secretary, Dental Secretary*

**43-6014 Secretaries, Except Legal, Medical and Executive**

Perform routine clerical and administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers. Exclude legal, medical, or executive secretaries and administrative assistants (43-6011 through 43-6013).

*Illustrative Examples: Personal Secretary, Office Secretary, Receptionist Secretary*

**43-9011 Computer Operators**

Monitor and control electronic computer and peripheral electronic data processing equipment to process business, scientific, engineering, and other data according to operating instructions. May enter commands at a computer terminal and set controls on computer and peripheral devices. Monitor and respond to operating and error messages. Exclude "Data Entry Keyers" (43-9021).

*Illustrative Examples: Console Operator, Data Processing Clerk, Peripheral Equipment Operator*

**43-9021 Data Entry Keyers**

Operate data entry device, such as keyboard or photo composing perforator. Duties may include verifying data and preparing materials for printing. Exclude "Word Processors and Typists" (43-9022).

*Illustrative Examples: Key punch Operator, Data Typist*

**43-9022 Word Processors and Typists**

Use word processor/computer or typewriter to type letters, reports, forms, or other material from rough draft, corrected copy, or voice recording. May perform other clerical duties as assigned. Include composing data keyers. Exclude "Data Entry Keyers" (43-9021), "Secretaries and Administrative Assistants" (43-6011 through 43-6014), "Court Reporters" (23-2091), and "Medical Transcriptionists" (31-9094).

*Illustrative Examples: Clerk Typist, Dictaphone Typist*

**43-9031 Desktop Publishers**

Format typescript and graphic elements using computer software to produce publication-ready material.

*Illustrative Examples: Computer Compositor, Electronic Pagination System Operator, Page Makeup System Operator*

**43-9041 Insurance Claims and Policy Processing Clerks**

Process new insurance policies, modifications to existing policies, and claims forms. Obtain information from policyholders to verify the accuracy and completeness of information on claims forms, applications and related documents, and company records. Update existing policies and company records to reflect changes requested by policyholders and insurance company representatives. Exclude "Claims Adjusters, Examiners and Investigators" (13-1031).

*Illustrative Examples: Claim Taker, Policy Issue Clerk, Underwriting Clerk*

**43-9051 Mail Clerks and Mail Machine Operators, Except Postal Service**

Prepare incoming and outgoing mail for distribution. Use hand or mail handling machines to time stamp, open, read, sort, and route incoming mail; and address, seal, stamp, fold, stuff, and affix postage to outgoing mail or packages. Duties may also include keeping necessary records and completed forms.

*Illustrative Examples: Addressing Machine Operator, Mail Distributor, Mail Opener*

**43-9061 Office Clerks, General**

Perform duties too varied and diverse to be classified in any specific office clerical occupation, requiring limited knowledge of office management systems and procedures. Clerical duties may be assigned in accordance with the office procedures of individual establishments and may include a combination of answering telephones, bookkeeping, typing or word processing, stenography, office machine operation, and filing.

*Illustrative Examples: Administrative Clerk, Office Assistant, Real Estate Clerk*

**43-9071 Office Machine Operators, Except Computer**

Operate one or more of a variety of office machines, such as photocopying, photographic, and duplicating machines, or other office machines. Exclude "Computer Operators" (43-9011), "Mail Clerks and Mail Machine Operators" (43-9051) and "Billing and Posting Clerks and Machine Operators" (43-3021).

*Illustrative Examples: Check Embosser, Coin Wrapping Machine Operator, Copy Machine Operator*

**43-9081 Proofreaders and Copy Markers**

Read transcript or proof type setup to detect and mark for correction any grammatical, typographical, or compositional errors. Exclude workers whose primary duty is editing copy. Include proofreaders of Braille.

*Illustrative Examples: Braille Proofreader, Copyreader*

**43-9111 Statistical Assistants**

Compile and compute data according to statistical formulas for use in statistical studies. May perform actuarial computations and compile charts and graphs for use by actuaries. Include actuarial clerks.

*Illustrative Examples: Tabulating Clerk, Compiler, Data Technician*

## Farming, Fishing and Forestry Occupations

### **45-1011 First-Line Supervisors/Managers of Farming, Fishing and Forestry Workers**

Directly supervise and coordinate the activities of agricultural, forestry, aquacultural, and related workers. Exclude "First-Line Supervisors/Managers of Landscaping, Lawn Service and Groundskeeping Workers" (37-1012).

*Illustrative Examples: Christmas Tree Farm Manager, Harvest Crew Supervisor, Fish Hatchery Supervisor*

### **45-2041 Graders and Sorters, Agricultural Products**

Grade, sort, or classify unprocessed food and other agricultural products by size, weight, color, or condition. Exclude "Agricultural Inspectors" (45-2011).

*Illustrative Examples: Chicken Grader, Cotton Classer, Fruit Sorter*

### **45-2091 Agricultural Equipment Operators**

Drive and control farm equipment to till soil and to plant, cultivate, and harvest crops. May perform tasks, such as crop baling or hay bucking. May operate stationary equipment to perform postharvest tasks, such as husking, shelling, threshing, and ginning.

*Illustrative Examples: Baler, Combine Operator, Tractor Driver*

### **45-2092 Farmworkers and Laborers, Crop, Nursery and Greenhouse**

Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; cleaning, grading, sorting, packing and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities. Exclude "Graders and Sorters, Agricultural Products" (45-2041). Exclude "Forest, Conservation, and Logging Workers" (45-4011 through 45-4029).

*Illustrative Examples: Apple Picker, Tobacco Cutter, Vegetable Loader*

### **45-2093 Farmworkers, Farm and Ranch Animals**

Attend to live farm, ranch, or aquacultural animals that may include cattle, sheep, swine, goats, horses and other equines, poultry, finfish, shellfish, and bees. Attend to animals produced for animal products, such as meat, fur, skins, feathers, eggs, milk, and honey. Duties may include feeding, watering, herding, grazing, castrating, branding, debeaking, weighing, catching, and loading animals. May maintain records on animals; examine animals to detect diseases and injuries; assist in birth deliveries; and administer medications, vaccinations, or insecticides as appropriate. May clean and maintain animal housing areas. Include workers who shear wool from sheep, and collect eggs in hatcheries.

*Illustrative Examples: Horse Groomer, Beekeeper, Livestock Feeder*

### **45-4021 Fallers**

(Lumberjack) Use axes or chainsaws to fell trees using knowledge of tree characteristics and cutting techniques to control direction of fall and minimize tree damage.

*Illustrative Examples: Cross Cut Sawyer, Timber Cutter*

### **45-4022 Logging Equipment Operators**

Drive logging tractor or wheeled vehicle equipped with one or more accessories, such as bulldozer blade, frontal shear, grapple, logging arch, cable winches, hoisting rack, or crane boom, to fall trees, to skid, load, unload, or stack logs; or to pull stumps or clear brush.

*Illustrative Examples: Log Hauler, Logging Tractor Operator, Skidder Driver*

### **45-4023 Log Graders and Scalers**

Grade logs or estimate the marketable content or value of logs or pulpwood in sorting yards, millpond, log deck, or similar locations. Inspect logs for defects or measure logs to determine volume. Exclude "Purchasing Agents and Buyers, Farm Products" (13-1021).

*Illustrative Examples: Timber Estimator, Landing Scaler*

## Construction and Extraction Occupations

### **47-1011 First-Line Supervisors/Managers of Construction Trades and Extraction Workers**

Directly supervise and coordinate activities of construction or extraction workers.

*Illustrative Examples: Cement Contractor, Quarry Boss*

### **47-2011 Boilermakers**

Construct, assemble, maintain, and repair stationary steam boilers and boiler house auxiliaries. Align structures or plate sections to assemble boiler frame tanks or vats following blueprints. Work involves use of hand and power tools, plumb bobs, levels, wedges, dogs, or turnbuckles. Assist in testing assembled vessels. Direct cleaning of boilers and boiler furnaces. Inspect and repair boiler fittings, such as safety valves, regulators, automatic-control mechanisms, water columns, and auxiliary machines.

*Illustrative Examples: Boiler Installer, Boiler Mechanic, Pressure Tester*

### **47-2021 Brickmasons and Blockmasons**

Lay and bind building materials, such as brick, structural tile, concrete block, cinder block, glass block, and terra-cotta block, with mortar and other substances to construct or repair walls, partitions, arches, sewers, and other structures. Exclude "Stonemasons" (47-2022). Classify installers of mortarless segmental concrete masonry wall units in "Landscaping and Groundskeeping Workers" (37-3011).

*Illustrative Examples: Adobe Layer, Chimney Builder, Furnace Liner*

### **47-2022 Stonemasons**

Build stone structures, such as piers, walls, and abutments. Lay walks, curbstones, or special types of masonry for vats, tanks, and floors.

*Illustrative Examples: Granite Setter, Monument Installer, Rock Mason*

### **47-2031 Carpenters**

Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall and batt or roll insulation. Include brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways to control the proper circulation of air through the passageways and to the working places.

*Illustrative Examples: Shipwright, Cabinetmaker, Wood Floor Layer*

### **47-2041 Carpet Installers**

Lay and install carpet from rolls or blocks on floors. Install padding and trim flooring materials. Exclude "Floor Layers, Except Carpet, Wood, and Hard Tiles" (47-2042).

*Illustrative Examples: Floor Coverer, Rug Layer*

### **47-2044 Tile and Marble Setters**

Apply hard tile, marble, and wood tile to walls, floors, ceilings, and roof decks.

*Illustrative Examples: Ceramic Tile Installer, Hard Tile Setter, Marble Installer*

### **47-2051 Cement Masons and Concrete Finishers**

Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, roads, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs, or gutters; patch voids; use saws to cut expansion joints. Classify installers of mortarless segmental concrete masonry wall units in "Landscaping and Groundskeeping Workers" (37-3011).

*Illustrative Examples: Curb Builder, Concrete Floor Installer*

### **47-2061 Construction Laborers**

Perform tasks involving physical labor at building, highway, and heavy construction projects, tunnel and shaft excavations, and demolition sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, clean up rubble and debris, and remove asbestos, lead, and other hazardous waste materials. May assist other craft workers. Exclude construction laborers who primarily assist a particular craft worker, and classify them under "Helpers, Construction Trades" (47-3011 through 47-3016).

*Illustrative Examples: Air Hammer Operator, Asphalt Patcher, Construction Craft Laborer*



**47-2071 Paving, Surfacing and Tamping Equipment Operators**

Operate equipment used for applying concrete, asphalt, or other materials to roadbeds, parking lots, or airport runways and taxiways, or equipment used for tamping gravel, dirt, or other materials. Include concrete and asphalt paving machine operators, form tampers, tamping machine operators, and stone spreader operators.

*Illustrative Examples: Asphalt Spreader Operator, Blacktop Machine Operator, Road Grader*

**47-2073 Operating Engineers and Other Construction Equipment Operators**

Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties. Exclude "Crane and Tower Operators" (53-7021) and equipment operators who work in extraction or other non-construction industries.

*Illustrative Examples: Bulldozer Operator, Power Grader Operator, Steam Shovel Operator*

**47-2081 Drywall and Ceiling Tile Installers**

Apply plasterboard or other wallboard to ceilings or interior walls of buildings. Apply or mount acoustical tiles or blocks, strips, or sheets of shock-absorbing materials to ceilings and walls of buildings to reduce or reflect sound. Materials may be of decorative quality. Include lathers who fasten wooden, metal, or rockboard lath to walls, ceilings or partitions of buildings to provide support base for plaster, fireproofing, or acoustical material. Exclude "Carpenters" (47-2031), and "Tile and Marble Setters" (47-2044).

*Illustrative Examples: Acoustical Carpenter, Lather, Sheet Rock Hanger*

**47-2082 Tapers**

Seal joints between plasterboard or other wallboard to prepare wall surface for painting or papering.

*Illustrative Examples: Sheetrock Taper, Wall Taper*

**47-2111 Electricians**

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service streetlights, intercom systems, or electrical control systems. Exclude "Security and Fire Alarm Systems Installers" (49-2098).

*Illustrative Examples: Electrical Sign Servicer, House Wirer, Chief Electrician*

**47-2121 Glaziers**

Install glass in windows, skylights, storefronts, and display cases, or on surfaces, such as building fronts, interior walls, ceilings, and tabletops.

*Illustrative Examples: Window Glass Installer, Plate Glass Installer, Stained Glass Glazier*

**47-2141 Painters, Construction and Maintenance**

Paint walls, equipment, buildings, bridges, and other structural surfaces, using brushes, rollers, and spray guns. May remove old paint to prepare surface prior to painting. May mix colors or oils to obtain desired color or consistency. Exclude "Paperhangers" (47-2142).

*Illustrative Examples: Bridge Painter, Traffic Line Painter, House Painter*

**47-2151 Pipelayers**

Lay pipe for storm or sanitation sewers, drains, and water mains. Perform any combination of the following tasks: grade trenches or culverts, position pipe, or seal joints. Exclude "Welders, Cutters, Solderers and Brazers" (51-4121).

*Illustrative Examples: Trench Pipe Layer, Pipe Liner, Sewer Connector*

**47-2152 Plumbers, Pipefitters and Steamfitters**

Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems.

*Illustrative Examples: Gas Line Installer, Hot Water Heater Installer, Sprinkling System Installer*

**47-2171 Reinforcing Iron and Rebar Workers**

Position and secure steel bars or mesh in concrete forms in order to reinforce concrete. Use a variety of fasteners, rod-bending machines, blowtorches, and hand tools. Include rod busters.

*Illustrative Examples: Reinforcing Rod Layer, Rod Buster, Steel Tier*

**47-2181 Roofers**

Cover roofs of structures with shingles, slate, asphalt, aluminum, wood, and related materials. May spray roofs, sidings, and walls with material to bind, seal, insulate, or soundproof sections of structures.

*Illustrative Examples: Slater, Hot Tar Roofer, Terra-cotta Roofer*

**47-2211 Sheet Metal Workers**

Fabricate, assemble, install, and repair sheet metal products and equipment, such as ducts, control boxes, drain-pipes, and furnace casings. Work may involve any of the following: setting up and operating fabricating machines to cut, bend, and straighten sheet metal; shaping metal over anvils, blocks, or forms using hammer; operating soldering and welding equipment to join sheet metal parts; inspecting, assembling, and smoothing seams and joints of burred surfaces. Include sheet metal duct installers who install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes.

*Illustrative Examples: Duct Installer, Metal Work, Tinsmith*

**47-3011 Helpers, Brickmasons, Blockmasons, Stonemasons and Tile and Marble Setters**

Help brickmasons, blockmasons, stonemasons, or tile and marble setters by performing duties of lesser skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate skilled construction trade occupation (47-2011 through 47-2221).

Exclude construction laborers who do not primarily assist brickmasons, blockmasons, and stonemasons or tile and marble setters, and classify them under "Construction Laborers" (47-2061).

*Illustrative Examples: Brick Carrier, Brick Washer, Tile Layer's Helper*

**47-3012 Helpers, Carpenters**

Help carpenters by performing duties of lesser skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate skilled construction trade occupation (47-2011 through 47-2221). Exclude construction laborers who do not primarily assist carpenters, and classify them under "Construction Laborers" (47-2061).

*Illustrative Examples: Carpenter's Mate, Joiner's Helper, Cabinetmaker's Helper*

**47-3013 Helpers, Electricians**

Help electricians by performing duties of lesser skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate skilled construction trade occupation (47-2011 through 47-2221). Exclude construction laborers who do not primarily assist electricians, and classify them under "Construction Laborers" (47-2061).

*Illustrative Examples: Utilities Ground Worker, Electrician's Assistant*

**47-3014 Helpers, Painters, Paperhangers, Plasterers and Stucco Masons**

Help painters, paperhangers, plasterers, or stucco masons by performing duties of lesser skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate skilled construction trade occupation (47-2011 through 47-2221). Exclude construction laborers who do not primarily assist painters, paperhangers, plasterers, or stucco masons, and classify them under "Construction Laborers" (47-2061).

*Illustrative Example: Plaster Tender*

**47-3015 Helpers, Pipelayers, Plumbers, Pipefitters and Steamfitters**

Help plumbers, pipefitters, steamfitters, or pipelayers by performing duties of lesser skill. Duties include using, supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate skilled construction trade occupation (47-2011 through 47-2221). Exclude construction laborers who do not primarily assist plumbers, pipefitters, steamfitters, or pipelayers, and classify them under "Construction Laborers" (47-2061).

*Illustrative Examples: Pipe Cutter, Plumber's Assistant, Water Main Installer's Helper*

**47-4011 Construction and Building Inspectors**

Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.

*Illustrative Examples: Highway Inspector, Electrical Inspector, Architectural Inspector*

**47-4031 Fence Erectors**

Erect and repair metal and wooden fences and fence gates around highways, industrial establishments, residences, or farms, using hand and power tools.

*Illustrative Examples: Wire Fence Builder, Wood Fence Installer*

**47-4041 Hazardous Materials Removal Workers**

Identify, remove, pack, transport, or dispose of hazardous materials, including asbestos, lead-based paint, waste oil, fuel, transmission fluid, radioactive materials, contaminated soil, etc. Specialized training and certification in hazardous materials handling or a confined entry permit are generally required. May operate earthmoving equipment or trucks.

*Illustrative Examples: Asbestos Remover, Irradiated Fuel Handler, Hazardous Waste Remover*

**47-4051 Highway Maintenance Workers**

Maintain highways, municipal and rural roads, airport runways, and rights-of-way. Duties include patching broken or eroded pavement, repairing guardrails, highway markers, and snow fences. May also mow or clear brush from along road or plow snow from roadway. Exclude "Tree Trimmers and Pruners" (37-3013).

*Illustrative Examples: Snowplow Operator, Road Patcher, Road Sign Installer*

**47-4061 Rail-Track Laying and Maintenance Equipment Operators**

Lay, repair, and maintain track for standard or narrow-gauge railroad equipment used in regular railroad service or in plant yards, quarries, sand and gravel pits, and mines. Include ballast cleaning machine operators and roadbed tamping machine operators.

*Illustrative Examples: Ballast Cleaning Machine Operator, Track Surfacing Machine Operator, Track Dresser*

**47-5013 Service Unit Operators, Oil, Gas and Mining**

Operate equipment to increase oil flow from producing wells or to remove stuck pipe, casing, tools, or other obstructions from drilling wells. May also perform similar services in mining exploration operations. Include fishing tool technicians.

*Illustrative Examples: Fishing Tool Operator, Well Cleaner*

**47-5021 Earth Drillers, Except Oil and Gas**

Operate a variety of drills—such as rotary, churn, and pneumatic—to tap subsurface water and salt deposits, to remove core samples during mineral exploration or soil testing, and to facilitate the use of explosives in mining or construction. May use explosives. Include horizontal and earth boring machine operators.

*Illustrative Examples: Auger Operator, Earth Boring Machine Operator, Tunneling Machine Operator*

**47-5031 Explosives Workers, Ordnance Handling Experts and Blasters**

Place and detonate explosives to demolish structures or to loosen, remove, or displace earth, rock, or other materials. May perform specialized handling, storage, and accounting procedures. Include seismograph shooters. Exclude "Earth Drillers, Except Oil and Gas" (47-5021) who may also work with explosives.

*Illustrative Examples: Dynamiter, Explosives Expert, Blast Setter*

**47-5051 Rock Splitters, Quarry**

Separate blocks of rough dimension stone from quarry mass using jackhammer and wedges.

*Illustrative Examples: Quarry Plug and Feather Driller, Rock Breaker*

**47-5071 Roustabouts, Oil and Gas**

Assemble or repair oil field equipment using hand and power tools. Perform other tasks as needed.

*Illustrative Examples: Connection Worker, Oil Field Laborer*

**47-5081 Helpers, Extraction Workers**

Help extraction craft workers, such as earth drillers, blasters and explosives workers, derrick operators, and mining machine operators, by performing duties of lesser skill. Duties include supplying equipment or cleaning work area. Exclude apprentice workers and report them with the appropriate extraction trade occupation (47-5011 through 47-5099).

*Illustrative Examples: Blaster's Helper, Tunnel Mucker, Mining Helper*

## **Installation, Maintenance and Repair Occupations**

**49-1011 First-Line Supervisors/Managers of Mechanics, Installers and Repairers**

Supervise and coordinate the activities of mechanics, installers, and repairers. Exclude team or work leaders.

*Illustrative Examples: Marine Service Manager, Ground Crew Chief, Engine Repair Supervisor*

**49-2011 Computer, Automated Teller and Office Machine Repairers**

Repair, maintain, or install computers, word processing systems, automated teller machines, and electronic office machines, such as duplicating and fax machines.

*Illustrative Examples: ATM Specialist, Cash Register Servicer, Computer Installer*

**49-2022 Telecommunications Equipment Installers and Repairers, Except Line Installers**

Set up, rearrange, or remove switching and dialing equipment used in central offices. Service or repair telephones and other communication equipment on customers' property. May install equipment in new locations or install wiring and telephone jacks in buildings under construction.

*Illustrative Examples: Central Office Equipment Installer, Electronics Installer, Exchange Mechanic*

**49-2092 Electric Motor, Power Tool and Related Repairers**

Repair, maintain, or install electric motors, wiring, or switches.

*Illustrative Examples: Armature Winder, Generator Mechanic, Electric Golf Cart Repairer*

**49-2093 Electrical and Electronics Installers and Repairers, Transportation Equipment**

Install, adjust, or maintain mobile electronics communication equipment, including sound, sonar, security, navigation, and surveillance systems on trains, watercraft, or other mobile equipment. Exclude "Avionics Technicians" (49-2091) and "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096).

*Illustrative Example: Locomotive Electrician*

**49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment**

Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas. Exclude "Avionics Technicians" (49-2091), "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096), and "Electrical and Electronics Installers and Repairers, Transportation Equipment" (49-2093).

*Illustrative Examples: Missile Pad Mechanic, Radar Technician, Amplifier Mechanic*

**49-2097 Electronic Home Entertainment Equipment Installers and Repairers**

Repair, adjust, or install audio or television receivers, stereo systems, camcorders, video systems, or other electronic home entertainment equipment.

*Illustrative Examples: Electric Organ Technician, Television Mechanic, Satellite Dish Installer*

**49-2098 Security and Fire Alarm Systems Installers**

Install, program, maintain, and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes. Exclude "Electricians" (47-2111) who do a broad range of electrical wiring.

*Illustrative Examples: Fire Alarm Installer, Burglar Alarm Mechanic*

**49-3011 (SOC code only) Aircraft Mechanics and Service Technicians**

This broad occupation includes the following two occupations:

**49-3012 Aircraft Mechanics and Service Technicians, FAA certified****49-3013 Aircraft Mechanics and Service Technicians, not FAA certified**

Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Include helicopter and aircraft engine specialists. Exclude "Avionics Technician" (49-2091).

*Illustrative Examples: Aircraft Engine Specialist, Flight Test Mechanic, Airframe Mechanic*

**49-3021 Automotive Body and Related Repairers**

Repair and refinish automotive vehicle bodies and straighten vehicle frames. Exclude "Painters, Transportation Equipment" (51-9122) and "Automotive Glass Installers and Repairers" (49-3022).

*Illustrative Examples: Auto Body Customizer, Collision Mechanic, Frame Straightener*

**49-3022 Automotive Glass Installers and Repairers**

Replace or repair broken windshields and window glass in motor vehicles.

*Illustrative Examples: Auto Glass Mechanic, Windshield Installer, Auto Glass Fitter*

**49-3023 Automotive Service Technicians and Mechanics**

Diagnose, adjust, repair, or overhaul automotive vehicles. Exclude "Automotive Body and Related Repairers" (49-3021), "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031), and "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096).

*Illustrative Examples: Auto Brake Mechanic, Fuel Injection Servicer, Auto Transmission Specialist*

**49-3031 Bus and Truck Mechanics and Diesel Engine Specialists**

Diagnose, adjust, repair, or overhaul trucks, buses, and all types of diesel engines. Include mechanics working primarily with automobile diesel engines.

*Illustrative Examples: Tractor Trailer Mechanic, Diesel Mechanic, Farm Equipment Engine Mechanic*

**49-3041 Farm Equipment Mechanics**

Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems. Exclude "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031).

*Illustrative Examples: Irrigation Equipment Mechanic, Dairy Equipment Installer*

**49-3042 Mobile Heavy Equipment Mechanics, Except Engines**

Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining. Exclude "Rail Car Repairers" (49-3043) and "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031).

*Illustrative Examples: Construction Equipment Mechanic, Forklift Mechanic, Bulldozer Mechanic*

**49-3051 Motorboat Mechanics**

Repair and adjust electrical and mechanical equipment of gasoline or diesel powered inboard, inboard-outboard, or outboard boat engines. Exclude "Diesel Engine Specialists" (49-3031).

*Illustrative Example: Outboard Motor Mechanic*

**49-3052 Motorcycle Mechanics**

Diagnose, adjust, repair, or overhaul motorcycles, scooters, mopeds, dirt bikes, or similar motorized vehicles.

*Illustrative Examples: Motor Scooter Mechanic, Motorcycle Repairer*

**49-3053 Outdoor Power Equipment and Other Small Engine Mechanics**

Diagnose, adjust, repair, or overhaul small engines used to power lawn mowers, chain saws, and related equipment.

*Illustrative Examples: Chain Saw Mechanic, Lawn Mower Repairer, Snowmobile Mechanic*

**49-3091 Bicycle Repairers**

Repair and service bicycles.

*Illustrative Example: Bicycle Mechanic*

**49-3092 Recreational Vehicle Service Technicians**

Diagnose, inspect, adjust, repair, or overhaul recreational vehicles including travel trailers. May specialize in maintaining gas, electrical, hydraulic, plumbing, or chassis/towing systems as well as repairing generators, appliances, and interior components. Include workers who perform customized van conversions. Exclude "Automotive Service Technicians and Mechanics" (49-3023) and "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031) who also work on recreation vehicles.

*Illustrative Example: RV Mechanic*

**49-3093 Tire Repairers and Changers**

Repair and replace tires.

*Illustrative Examples: Tire Balancer, Tire Fixer*

**49-9011 Mechanical Door Repairers**

Install, service, or repair opening and closing mechanisms of automatic doors and hydraulic door closers. Include garage door mechanics.

*Illustrative Example: Automatic Door Mechanic*

**49-9012 Control and Valve Installers and Repairers, Except Mechanical Door**

(Electric Meter Installer) Install, repair, and maintain mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.

*Illustrative Examples: Gas Meter Prover, Thermostat Repairer*

**49-9021 Heating, Air Conditioning and Refrigeration Mechanics and Installers**

Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.

*Illustrative Examples: Furnace Converter, Gas Furnace Installer, Oil Burner Repairer*

**49-9031 Home Appliance Repairers**

Repair, adjust, or install all types of electric or gas household appliances, such as refrigerators, washers, dryers, and ovens.

*Illustrative Examples: Window Air Conditioner Mechanic, Vacuum Cleaner Repairer, Washing Machine Installer*

**49-9041 Industrial Machinery Mechanics**

Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems. Exclude "Millwrights" (49-9044), "Mobile Heavy Equipment Mechanics, Except Engines" (49-3042), and "Maintenance Workers, Machinery" (49-9043) who perform only routine tasks.

*Illustrative Examples: Conveyor Belt Installer, Turbine Mechanic, Hydroelectric Machinery Mechanic*

**49-9042 Maintenance and Repair Workers, General**

Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. Exclude "Maintenance Workers, Machinery" (49-9043).

*Illustrative Examples: Building Maintenance Repairer, Troubleshooting Mechanic, Mechanical Adjuster*

**49-9043 Maintenance Workers, Machinery**

Lubricate machinery, change parts, or perform other routine machinery maintenance. Exclude "Maintenance and Repair Workers, General" (49-9042).

*Illustrative Examples: Belt Repairer, Grease Packer Machine Oiler*

**49-9044 Millwrights**

Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.

*Illustrative Examples: Machine Erector, Machine Rigger, Machinery Dismantler*

**49-9051 Electrical Power-Line Installers and Repairers**

Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers. Exclude "Electrical and Electronics Repairers, Powerhouse, Substation and Relay" (49-2095).

*Illustrative Examples: Pole Climber, High Tension Tester, Electric Utility Wire Stretcher*

**49-9052 Telecommunications Line Installers and Repairers**

String and repair telephone and television cable, including fiber optics and other equipment for transmitting messages or television programming.

*Illustrative Examples: Telecommunications Cable Splicer, Telecommunications Wire Stretcher, Cable Television Installer*

**49-9062 Medical Equipment Repairers**

Test, adjust, or repair biomedical or electromedical equipment.

*Illustrative Examples: Biomedical Equipment Technician, Hearing Aid Mechanic, Surgical Instrument Mechanic*

**49-9091 Coin, Vending and Amusement Machine Servicers and Repairers**

Install, service, adjust, or repair coin, vending, or amusement machines including video games, juke boxes, pinball machines, or slot machines.

*Illustrative Examples: Cigarette Machine Mechanic, Slot Machine Mechanic, Video Game Mechanic*

**49-9095 Manufactured Building and Mobile Home Installers**

Move or install mobile homes or prefabricated buildings.

*Illustrative Examples: Mobile Home Mechanic, House trailer Servicer*

**49-9098 Helpers, Installation, Maintenance and Repair Workers**

Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties, such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.

*Illustrative Examples: Mechanic's Helper, Diver's Helper, Blacksmith's Helper*

## Production Occupations

**51-1011 First-Line Supervisors/Managers of Production and Operating Workers**

Supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Exclude team or work leaders.

*Illustrative Examples: Laundromat Manager, Station Chief, Assembly Line Supervisor*

**51-2021 Coil Winders, Tapers and Finishers**

Wind wire coils used in electrical components, such as resistors and transformers, and in electrical equipment and instruments, such as field cores, bobbins, armature cores, electrical motors, generators, and control equipment.

*Illustrative Examples: Coil Builder, Motor Winder, Wire Coiler*

**51-2022 Electrical and Electronic Equipment Assemblers**

Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering systems, electric motors, and batteries.

*Illustrative Examples: Anode Builder, Battery Builder, Industrial Equipment Wirer*

**51-2041 Structural Metal Fabricators and Fitters**

Fabricate, lay out, position, align, and fit parts of structural metal products.

*Illustrative Examples: Manufacturing Ornamental Metal Worker, Metal Box Maker, Protector Plate Attacher*

**51-2092 Team Assemblers**

Work as part of a team having responsibility for assembling an entire product or component of a product. Team assemblers can perform all tasks conducted by the team in the assembly process and rotate through all or most of them rather than being assigned to a specific task on a permanent basis. May participate in making management decisions affecting the work. Team leaders who work as part of the team should be included. Exclude assemblers (51-2011 through 51-2099) who continuously perform the same task.

**51-3011 Bakers**

Mix and bake ingredients according to recipes to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods. Include pastry chefs in restaurants and hotels with "Chefs and Head Cooks" (35-1011).

*Illustrative Examples: Cake Maker, Head Baker, Pastry Finisher*

**51-3021 Butchers and Meat Cutters**

Cut, trim, or prepare consumer-sized portions of meat for use or sale in retail establishments.

*Illustrative Examples: Carver, Meat Department Manager, Cleaver*

**51-3022 Meat, Poultry and Fish Cutters and Trimmers**

Use hand tools to perform routine cutting and trimming of meat, poultry, and fish.

*Illustrative Examples: Calf Skinner, Eviscerator, Filleter*

**51-3023 Slaughterers and Meat Packers**

Work in slaughtering, meatpacking, or wholesale establishments performing precision functions involving the preparation of meat. Work may include specialized slaughtering tasks, cutting standard or premium cuts of meat for marketing, making sausage, or wrapping meats. Exclude "Meat, Poultry and Fish Cutters and Trimmers" (51-3022) who perform routine, lower-skilled meat cutting.

*Illustrative Examples: Hog Sticker, Shactor, Beef Splitter*

**51-3092 Food Batchmakers**

Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Include candy makers and cheese makers.

*Illustrative Examples: Candy Maker, Honey Blender, Peanut Butter Maker*

**51-3093 Food Cooking Machine Operators and Tenders**

Operate or tend cooking equipment, such as steam cooking vats, deep fry cookers, pressure cookers, kettles, and boilers, to prepare food products. Exclude "Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders" (51-3091).

*Illustrative Examples: Doughnut Maker, Sausage Cooker, Potato Chip Fryer*

**51-4022 Forging Machine Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend forging machines to taper, shape, or form metal or plastic parts.

*Illustrative Examples: Cold Header Operator, Swager Operator, Drop Hammer Operator*

**51-4031 Cutting, Punching and Press Machine Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.

*Illustrative Examples: Perforator Operator, Crimping Machine Operator, Four Slide Machine Setter*

**51-4033 Grinding, Lapping, Polishing and Buffing Machine Tool Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.

*Illustrative Examples: Barrel Polisher, Jewel Bearing Facer, Metal Filer*

**51-4035 Milling and Planing Machine Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend milling or planing machines to mill, plane, shape, groove, or profile metal or plastic work pieces.

*Illustrative Examples: Broaching Machine Operator, Profiler Operator, Scribing Machine Operator*

**51-4041 Machinists**

Set up and operate a variety of machine tools to produce precision parts and instruments. Include precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures.

*Illustrative Examples: Electrical Instrument Maker, Machine Fitter*

**51-4051 Metal-Refining Furnace Operators and Tenders**

(Smelter) Operate or tend furnaces, such as gas, oil, coal, electric-arc or electric induction, open-hearth, or oxygen furnaces, to melt and refine metal before casting or to produce specified types of steel. Exclude "Heat Treating Equipment Setters, Operators and Tenders, Metal and Plastic" (51-4191).

*Illustrative Examples: Blast Furnace Blower, Bessemer Regulator*

**51-4052 Pourers and Casters, Metal**

Operate hand-controlled mechanisms to pour and regulate the flow of molten metal into molds to produce castings or ingots.

*Illustrative Examples: Ingot Header, Ladle Operator, Steel Pourer*

**51-4072 Molding, Coremaking and Casting Machine Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermo-plastic parts or products.

*Illustrative Examples: Centrifugal Casting Machine Operator, Injection Molding Machine Setter, Core Moulder*

**51-4081 Multiple Machine Tool Setters, Operators and Tenders, Metal and Plastic**

Set up, operate, or tend more than one type of cutting or forming machine tool or robot.

*Illustrative Examples: Machine Tool Operator, Combination Machine Tool Setter, Metal and Plastic Transfer Machine Operator*

**51-4121 Welders, Cutters, Solderers and Brazers**

Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

*Illustrative Examples: Acetylene Burner, Arc Welder, Blowtorch Operator*

**51-4194 Tool Grinders, Filers and Sharpeners**

Perform precision smoothing, sharpening, polishing, or grinding of metal objects.

*Illustrative Examples: Die Polisher, Precision Honer, Tool Maintenance Worker*

**51-5011 Bindery Workers**

Set up or operate binding machines that produce books and other printed materials. Include hand bindery workers. Exclude "Bookbinders" (51-5012).

*Illustrative Examples: Book Coverer, Stitching Machine Operator, Bookbinding Machine Operator*

**51-5021 Job Printers**

Set type according to copy; operate press to print job order; and read the proof for errors and clarity of impression, and correct imperfections. Job printers are often found in small establishments where work combines several job skills.

*Illustrative Examples: Job Press Operator, Apprentice Job Printer*

**51-5022 Prepress Technicians and Workers**

Set up and prepare material for printing presses. Include prepress functions, such as compositing, typesetting, layout, pasteup, camera operating, scanning, film stripping, and photoengraving.

*Illustrative Examples: Compositor, Lithographer, Photoengraving Etcher*

**51-5023 Printing Machine Operators**

Set up or operate various types of printing machines, such as offset, letterset, intaglio, or gravure presses or screen printers to produce print on paper or other materials.

*Illustrative Examples: Bag Printer, Offset Press Operator, Lithoplate Maker*

**51-6011 Laundry and Dry-Cleaning Workers**

Operate or tend washing or dry-cleaning machines to wash or dry-clean industrial or household articles, such as cloth garments, suede, leather, furs, blankets, draperies, fine linens, rugs, and carpets. Include spotters and dyers of these articles.

*Illustrative Examples: Laundry Carpet Cleaner, Silk Spotter, Washing Machine Operator*

**51-6021 Pressers, Textile, Garment and Related Materials**

Press or shape articles by hand or machine.

*Illustrative Examples: Clothes Ironer, Garment Steamer, Steam Operator*

**51-6031 Sewing Machine Operators**

Operate or tend sewing machines to join, reinforce, decorate, or perform related sewing operations in the manufacture of garment or nongarment products.

*Illustrative Examples: Blind Stitch Machine Operator, Loop Tacker, Hemmer*

**51-6051 Sewers, Hand**

(Hand Weaver) Sew, join, reinforce, or finish, usually with needle and thread, a variety of manufactured items. Include weavers and stitchers. Exclude "Fabric Menders, Except Garment" (49-9093).

*Illustrative Examples: Hand Stitcher, Hosiery Mender*



**51-6052 Tailors, Dressmakers and Custom Sewers**

Design, make, alter, repair, or fit garments.

*Illustrative Examples: Coat Maker, Hand Finisher, Except Toy Shop Tailor*

**51-6093 Upholsterers**

Make, repair, or replace upholstery for household furniture or transportation vehicles.

*Illustrative Examples: Car Seat Maker, Casket Coverer, Auto Top Mechanic*

**51-7011 Cabinetmakers and Bench Carpenters**

Cut, shape, and assemble wooden articles or set up and operate a variety of woodworking machines, such as power saws, jointers, and mortisers to surface, cut, or shape lumber or to fabricate parts for wood products. Exclude "Woodworking Machine Setters, Operators and Tenders" (51-7041 through 51-7042) who specialize in one or a limited number of machine phases.

*Illustrative Examples: Marquetry Worker, Antique Furniture Repairer, Wood Machinist*

**51-7021 Furniture Finishers**

Shape, finish, and refinish damaged, worn, or used furniture or new high-grade furniture to specified color or finish.

*Illustrative Examples: Furniture Polisher, Refinisher, Wood Grainer*

**51-7041 Sawing Machine Setters, Operators and Tenders, Wood**

Set up, operate, or tend wood sawing machines. Include head sawyers.

*Illustrative Examples: Crozer Operator, Sawyer, Wood Cutter*

**51-7042 Woodworking Machine Setters, Operators and Tenders, Except Sawing**

Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines.

*Illustrative Examples: Frazer, Molding Sander*

**51-8012 Power Distributors and Dispatchers**

Coordinate, regulate, or distribute electricity or steam.

*Illustrative Examples: Feeder Switchboard Operator, Electric and Gas Load Dispatcher, Substation Operator*

**51-8013 Power Plant Operators**

(Auxiliary Equipment Tender) Control, operate, or maintain machinery to generate electric power. Include auxiliary equipment operators. Exclude "Nuclear Power Reactor Operators" (51-8011).

*Illustrative Examples: Hydroelectric Operator, Generator Operator, Powerhouse Operator*

**51-8021 Stationary Engineers and Boiler Operators**

Operate or maintain stationary engines, boilers, or other mechanical equipment to provide utilities for buildings or industrial processes. Operate equipment, such as steam engines, generators, motors, turbines, and steam boilers.

*Illustrative Examples: Cooling System Operator, Low Pressure Firer, Steam Engineer*

**51-8031 Water and Liquid Waste Treatment Plant and System Operators**

Operate or control an entire process or system of machines, often through the use of control boards, to transfer or treat water or liquid waste.

*Illustrative Examples: Disposal Operator, Filtration Plant Operator, Sewage Plant Operator*

**51-8091 Chemical Plant and System Operators**

Control or operate an entire chemical process or system of machines.

*Illustrative Examples: Denitrator, Nitrogen Operator, Wash Operator*

**51-8093 Petroleum Pump System Operators, Refinery Operators and Gaugers**

Control the operation of petroleum refining or processing units. May specialize in controlling manifold and pumping systems, gauging or testing oil in storage tanks, or regulating the flow of oil into pipelines.

*Illustrative Examples: Absorption Plant Operator, Gasoline Plant Operator, Oil Refiner*

**51-9012 Separating, Filtering, Clarifying, Precipitating and Still Machine Setters, Operators and Tenders**

Set up, operate, or tend continuous flow or vat-type equipment; filter presses; shaker screens; centrifuges; condenser tubes; precipitating, fermenting, or evaporating tanks; scrubbing towers; or batch stills. These machines extract, sort, or separate liquids, gases, or solids from other materials to recover a refined product. Include dairy processing equipment operators. Exclude "Chemical Equipment Operators and Tenders" (51-9011).

*Illustrative Examples: Brewmaster, Dairy Processing Equipment Operator, Distiller*

**51-9021 Crushing, Grinding and Polishing Machine Setters, Operators and Tenders**

Set up, operate, or tend machines to crush, grind, or polish materials, such as coal, glass, grain, stone, food, or rubber.

*Illustrative Examples: Beveling and Edging Machine Operator, Pulverizer Operator, Sandblast Operator*

**51-9022 Grinding and Polishing Workers, Hand**

Grind, sand, or polish, using hand tools or handheld power tools, a variety of metal, wood, stone, clay, plastic, or glass objects. Include chippers, buffers, and finishers.

*Illustrative Examples: Metal Sander, Gun Barrel Finisher, Hand Buffer*

**51-9023 Mixing and Blending Machine Setters, Operators and Tenders**

Set up, operate, or tend machines to mix or blend materials, such as chemicals, tobacco, liquids, color pigments, or explosive ingredients. Exclude "Food Batchmakers" (51-3092).

*Illustrative Examples: Batchmaker, Clay Mixer, Tumbler Tender*

**51-9031 Cutters and Trimmers, Hand**

Use hand tools or handheld power tools to cut and trim a variety of manufactured items, such as carpet, fabric, stone, glass, or rubber.

*Illustrative Examples: Buttonhole Maker, Fur Trimmer, Thread Clipper*

**51-9041 Extruding, Forming, Pressing and Compacting Machine Setters, Operators and Tenders**

(Brick or Block Maker) Set up, operate, or tend machines, such as glass forming machines, plodder machines, and tuber machines, to shape and form products, such as glassware, food, rubber, soap, brick, tile, clay, wax, tobacco, or cosmetics. Exclude "Paper Goods Machine Setters, Operators and Tenders" (51-9196) and "Shoe Machine Operators and Tenders" (51-6042).

*Illustrative Examples: Briquette Maker, Cigarette Machine Operator, Rubber Laminating Machine Operator*

**51-9051 Furnace, Kiln, Oven, Drier and Kettle Operators and Tenders**

Operate or tend heating equipment other than basic metal, plastic, or food processing equipment. Includes activities, such as annealing glass, drying lumber, curing rubber, removing moisture from materials, or boiling soap.

*Illustrative Examples: Brick Baker, Stoker, Tunnel Kiln Operator*

**51-9061 Inspectors, Testers, Sorters, Samplers and Weighers**

Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.

*Illustrative Examples: Bearing Inspector, Quality Checker, Testing and Regulating Technician*

**51-9071 Jewelers and Precious Stone and Metal Workers**

Design, fabricate, adjust, repair, or appraise jewelry, gold, silver, other precious metals, or gems. Include diamond polishers and gem cutters and persons who perform precision casting and modeling of molds, casting metal in molds, or setting precious and semiprecious stones for jewelry and related products.

*Illustrative Examples: Diamond Expert, Gemologist, Goldsmith*

**51-9081 Dental Laboratory Technicians**

Construct and repair full or partial dentures or dental appliances. Exclude "Dental Assistants" (31-9091).

*Illustrative Examples: Ceramist, Crown and Bridge Technician, Orthodontic Technician*

**51-9082 Medical Appliance Technicians**

(Orthotics Technician) Construct, fit, maintain, or repair medical supportive devices, such as braces, artificial limbs, joints, arch supports, and other surgical and medical appliances.

*Illustrative Examples: Brace Maker, Prosthetics Technician*

**51-9083 Ophthalmic Laboratory Technicians**

Cut, grind, and polish eyeglasses, contact lenses, or other precision optical elements. Assemble and mount lenses into frames or process other optical elements. Include precision lens polishers or grinders, centerer edgers, and lens mounters. Exclude "Opticians, Dispensing" (29-2081).

*Illustrative Examples: Eyeglass Maker, Lens Grinder, Spectacle Truer*

**51-9111 Packaging and Filling Machine Operators and Tenders**

Operate or tend machines to prepare industrial or consumer products for storage or shipment. Include cannery workers who pack food products.

*Illustrative Examples: Bottle Caser, Wrapper Layer, Strapping Machine Operator*

**51-9121 Coating, Painting and Spraying Machine Setters, Operators and Tenders**

Set up, operate, or tend machines to coat or paint any of a wide variety of products including food, glassware, cloth, ceramics, metal, plastic, paper, or wood, with lacquer, silver, copper, rubber, varnish, glaze, enamel, oil, or rust-proofing materials. Exclude "Plating and Coating Machine Setters, Operators and Tenders, Metal and Plastic" (51-4193) and "Painters, Transportation Equipment" (51-9122).

*Illustrative Examples: Electrostatic Paint Operator, Silvering Applicator, Supercalender Operator*

**51-9122 Painters, Transportation Equipment**

Operate or tend painting machines to paint surfaces of transportation equipment, such as automobiles, buses, trucks, trains, boats, and airplanes. Include painters in auto body repair facilities.

*Illustrative Examples: Auto Painter, Rust Proofer*

**51-9123 Painting, Coating and Decorating Workers**

Paint, coat, or decorate articles, such as furniture, glass, plateware, pottery, jewelry, cakes, toys, books, or leather. Exclude "Artists and Related Workers" (27-1011 through 27-1019), "Designers" (27-1021 through 27-1029), "Photographic Process Workers" (51-9131), and "Etchers and Engravers" (51-9194).

*Illustrative Examples: Stenciler, Candy Dipper, Mirror Silverer*

**51-9132 Photographic Processing Machine Operators**

Operate photographic processing machines, such as photographic printing machines, film developing machines, and mounting presses.

*Illustrative Examples: Film Printer, Film Processor, Reproduction Machine Loader*

**51-9191 Cementing and Gluing Machine Operators and Tenders**

Operate or tend cementing and gluing machines to join items for further processing or to form a completed product. Processes include joining veneer sheets into plywood; gluing paper; joining rubber and rubberized fabric parts, plastic, simulated leather, or other materials. Exclude "Shoe Machine Operators and Tenders" (51-6042).

*Illustrative Examples: Bonding Molder, Paper Sealer, Taper Operator*

**51-9192 Cleaning, Washing and Metal Pickling Equipment Operators and Tenders**

(Fruit Washer) Operate or tend machines to wash or clean products, such as barrels or kegs, glass items, tinplate, food, pulp, coal, plastic, or rubber, to remove impurities.

*Illustrative Examples: Acid Dipper, Degreaser Operator, Pulp Bleacher*

**51-9195 Molders, Shapers and Casters, Except Metal and Plastic**

Mold, shape, form, cast, or carve products such as food products, figurines, tile, pipes, and candles consisting of clay, glass, plaster, concrete, stone, or combinations of materials.

*Illustrative Examples: Cigar Roller, Glass Blower, Marble Finisher*

**51-9198 Helpers, Production Workers**

Help production workers by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate production occupation (51-1011 through 51-9199).

*Illustrative Examples: Welder's Assistant, Tailor's Aide, Millwright's Helper*

## **Transportation and Material Moving Occupations**

**53-1011 Aircraft Cargo Handling Supervisors**

(Loadmaster) Direct ground crew in the loading, unloading, securing, and staging of aircraft cargo or baggage. Determine the quantity and orientation of cargo and compute aircraft center of gravity. May accompany aircraft as member of flight crew and monitor and handle cargo in flight, and assist and brief passengers on safety and emergency procedures. Include loadmasters.

*Illustrative Examples: Ramp Boss, Ground Crew Supervisor*

**53-1021 First-Line Supervisors/Managers of Helpers, Laborers and Material Movers, Hand**

Supervise and coordinate the activities of helpers, laborers, or material movers.

*Illustrative Examples: Cargo Supervisor, Yard Supervisor, Warehouse Supervisor*

**53-1031 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators**

Directly supervise and coordinate activities of transportation and material-moving machine and vehicle operators and helpers.

*Illustrative Examples: Dockmaster, Gas Station Manager, Roadmaster*

**53-2011 Airline Pilots, Copilots and Flight Engineers**

Pilot and navigate the flight of multiengine aircraft in regularly scheduled service for the transport of passengers and cargo. Requires Federal Air Transport rating and certification in specific aircraft type used. Include aircraft instructors with similar certification.

*Illustrative Examples: Airline Captain, First Officer, Flight Navigator*

**53-2012 Commercial Pilots**

Pilot and navigate the flight of small fixed or rotary winged aircraft, primarily for the transport of cargo and passengers. Requires commercial rating. Include aircraft instructors with similar certification.

*Illustrative Examples: Crop Duster, Helicopter Pilot, Test Pilot*

**53-2021 Air Traffic Controllers**

Control air traffic on and within vicinity of airport and movement of air traffic between altitude sectors and control centers according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and ensure flight safety.

*Illustrative Examples: Control Tower Operator, Flight Control Specialist, Flight Dispatcher*

**53-3011 Ambulance Drivers and Attendants, Except Emergency Medical Technicians**

Drive ambulance or assist ambulance driver in transporting sick, injured, or convalescent persons. Assist in lifting patients.

*Illustrative Example: Patient Carrier*

**53-3021 Bus Drivers, Transit and Intercity**

Drive bus or motor coach, including regular route operations, charters, and private carriage. May assist passengers with baggage. May collect fares or tickets.

*Illustrative Examples: Motor Coach Operator, Jitney Driver*

**53-3022 Bus Drivers, School**

Transport students or special clients, such as the elderly or persons with disabilities. Ensure adherence to safety rules. May assist passengers in boarding or exiting.

**53-3031 Driver/Sales Workers**

Drive truck or other vehicle over established routes or within an established territory and sell goods, such as food products, including restaurant take-out items, or pick up and deliver items, such as laundry. May also take orders and collect payments. Include newspaper delivery drivers. Exclude "Truck Drivers, Light or Delivery Services" (53-3033) and "Coin, Vending and Amusement Machine Servicers and Repairers" (49-9091).

*Illustrative Examples: Bakery Delivery Person, Milk Delivery Person, Bread Distributor*

**53-3032 Truck Drivers, Heavy and Tractor-Trailer**

Drive a tractor trailer combination or a truck with a capacity of at least 26,000 GVW, to transport and deliver goods, livestock, or materials in liquid, loose, or packaged form. May be required to unload truck. May require use of automated routing equipment. Requires commercial driver's license.

*Illustrative Examples: Auto Carrier Driver, Cement Truck Driver, Moving Van Driver*

**53-3033 Truck Drivers, Light or Delivery Services**

Drive a truck or van with a capacity of under 26,000 GVW, primarily to deliver or pick up merchandise or to deliver packages within a specified area. May require use of automatic routing or location software. May load and unload truck. Exclude "Couriers and Messengers" (43-5021).

*Illustrative Example: Parcel Post Truck Driver*

**53-3041 Taxi Drivers and Chauffeurs**

Drive automobiles, vans, or limousines to transport passengers. May occasionally carry cargo. Include hearse drivers. Exclude "Ambulance Drivers and Attendants, Except Emergency Medical Technicians" (53-3011) and "Bus Drivers" (53-3021 through 53-3022).

*Illustrative Examples: Cabdriver, Courtesy Van Driver, Limousine Driver*

**53-4011 Locomotive Engineers**

Drive electric, diesel-electric, steam, or gas-turbine-electric locomotives to transport passengers or freight. Interpret train orders, electronic or manual signals, and railroad rules and regulations.

*Illustrative Examples: Diesel Engineer, Narrow Gauge Operator, Railcar Operator*

**53-4013 Rail Yard Engineers, Dinkey Operators, and Hostlers**

Drive switching or other locomotive or dinkey engines within railroad yard, industrial plant, quarry, construction project, or similar location.

*Illustrative Examples: Car Mover, Larry Car Operator, Coal Tram Driver*

**53-4021 Railroad Brake, Signal and Switch Operators**

Operate railroad track switches. Couple or uncouple rolling stock to make up or break up trains. Signal engineers by hand or flagging. May inspect couplings, air hoses, journal boxes, and hand brakes.

*Illustrative Examples: Car Hopper, Coupler, Switch Tender*

**53-6021 Parking Lot Attendants**

Park automobiles or issue tickets for customers in a parking lot or garage. May collect fee.

*Illustrative Examples: Carhop, Car Runner, Valet Parker*

**53-6031 Service Station Attendants**

Service automobiles, buses, trucks, boats, and other automotive or marine vehicles with fuel, lubricants, and accessories. Collect payment for services and supplies. May lubricate vehicle, change motor oil, install antifreeze, or replace lights or other accessories, such as windshield wiper blades or fan belts. May repair or replace tires.

*Illustrative Examples: Filling Station Attendant, Gas and Oil Servicer, Pump Attendant*

**53-6051 Transportation Inspectors**

Inspect equipment or goods in connection with the safe transport of cargo or people. Include rail transport inspectors, such as freight inspectors, car inspectors, rail inspectors, and other nonprecision inspectors of other types of transportation vehicles.

*Illustrative Examples: Airplane Inspector, Motor Vehicle Examiner, Safety Agent*

**53-7011 Conveyor Operators and Tenders**

Control or tend conveyors or conveyor systems that move materials or products to and from stockpiles, processing stations, departments, or vehicles. May control speed and routing of materials or products.

*Illustrative Examples: Belt Tender, Grain Elevator Operator*

**53-7021 Crane and Tower Operators**

Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions. Exclude "Excavating and Loading Machine and Dragline Operators" (53-7032).

*Illustrative Examples: Boomsling Operator, Cherry Picker Operator, Scrap Drop Operator*

**53-7032 Excavating and Loading Machine and Dragline Operators**

Operate or tend machinery equipped with scoops, shovels, or buckets, to excavate and load loose materials. Exclude "Dredge Operators" (53-7031).

*Illustrative Examples: Backhoe Operator, Payloader Operator, Shovel Operator*

**53-7051 Industrial Truck and Tractor Operators**

Operate industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, construction site, or similar location. Exclude "Logging Equipment Operators" (45-4022).

*Illustrative Examples: Forklift Driver, Skidder Operator, Stacker Operator*

**53-7061 Cleaners of Vehicles and Equipment**

Wash or otherwise clean vehicles, machinery, and other equipment. Use such materials as water, cleaning agents, brushes, cloths, and hoses. Exclude "Janitors and Cleaners, Except Maids and Housekeeping Cleaners" (37-2011).

*Illustrative Examples: Barrel Washer, Auto Detailer, Machine Cleaner*

**53-7062 Laborers and Freight, Stock and Material Movers, Hand**

Manually move freight, stock, or other materials or perform other unskilled general labor. Include all unskilled manual laborers not elsewhere classified. Exclude "Material Moving Workers" (53-7011 through 53-7199) who use power equipment. Exclude "Construction Laborers" (47-2061) and "Construction Trades Helpers" (47-3011 through 47-3019).

*Illustrative Examples: Cargo Handler, Stevedore, Truck Loader and Unloader*

**53-7063 Machine Feeders and Offbearers**

Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.

*Illustrative Examples: Hopper Filler, Board Catcher, Doffer*

**53-7064 Packers and Packagers, Hand**

Pack or package by hand a wide variety of products and materials.

*Illustrative Examples: Bagger, Boxer, Gift Wrapper*

**53-7071 Gas Compressor and Gas Pumping Station Operators**

Operate steam, gas, electric motor, or internal combustion engine driven compressors. Transmit, compress, or recover gases, such as butane, nitrogen, hydrogen, and natural gas.

*Illustrative Examples: Gas Booster Engineer, Gas Transfer Operator*

**53-7072 Pump Operators, Except Wellhead Pumpers**

Tend, control, or operate power-driven, stationary, or portable pumps and manifold systems to transfer gases, oil, other liquids, slurries, or powdered materials to and from various vessels and processes.

*Illustrative Examples: Brewery Pumper, Main-Line Station Engineer, Oil Pumper*

**53-7073 Wellhead Pumpers**

Operate power pumps and auxiliary equipment to produce flow of oil or gas from wells in oil field.

*Illustrative Example: Oil Well Service Operator*

**53-7081 Refuse and Recyclable Material Collectors**

Collect and dump refuse or recyclable materials from containers into truck. May drive truck.

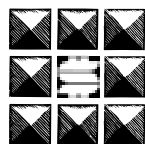
*Illustrative Examples: Garbage Collector, Scrap Metal Collector, Trash Collector*

**53-7121 Tank Car, Truck and Ship Loaders**

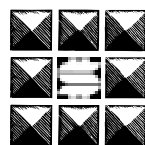
Load and unload chemicals and bulk solids, such as coal, sand, and grain into or from tank cars, trucks, or ships using material moving equipment. May perform a variety of other tasks relating to shipment of products. May gauge or sample shipping tanks and test them for leaks.

*Illustrative Examples: Coal Dumping Equipment Operator, Loader Operator, Spout Tender*

# Appendix



**Wage Conversion Table**



**Survey Methodology**

# Wage Conversion Table

Hourly	Weekly	Monthly	Annually	Hourly	Weekly	Monthly	Annually
\$5.00	\$200.00	\$866.67	\$10,400.00	\$10.50	\$420.00	\$1,820.00	\$21,840.00
5.10	204.00	884.00	10,608.00	10.60	424.00	1,837.33	22,048.00
5.20	208.00	901.33	10,816.00	10.70	428.00	1,854.67	22,256.00
5.30	212.00	918.67	11,024.00	10.80	432.00	1,872.00	22,464.00
5.40	216.00	936.00	11,232.00	10.90	436.00	1,889.33	22,672.00
5.50	220.00	953.33	11,440.00	11.00	440.00	1,906.67	22,880.00
5.60	224.00	970.67	11,648.00	11.10	444.00	1,924.00	23,088.00
5.70	228.00	988.00	11,856.00	11.20	448.00	1,941.33	23,296.00
5.80	232.00	1,005.33	12,064.00	11.30	452.00	1,958.67	23,504.00
5.90	236.00	1,022.67	12,272.00	11.40	456.00	1,976.00	23,712.00
6.00	240.00	1,040.00	12,480.00	11.50	460.00	1,993.33	23,920.00
6.10	244.00	1,057.33	12,688.00	11.60	464.00	2,010.67	24,128.00
6.20	248.00	1,074.67	12,896.00	11.70	468.00	2,028.00	24,336.00
6.30	252.00	1,092.00	13,104.00	11.80	472.00	2,045.33	24,544.00
6.40	256.00	1,109.33	13,312.00	11.90	476.00	2,062.67	24,752.00
6.50	260.00	1,126.67	13,520.00	12.00	480.00	2,080.00	24,960.00
6.60	264.00	1,144.00	13,728.00	12.10	484.00	2,097.33	25,168.00
6.70	268.00	1,161.33	13,936.00	12.20	488.00	2,114.67	25,376.00
6.80	272.00	1,178.67	14,144.00	12.30	492.00	2,132.00	25,584.00
6.90	276.00	1,196.00	14,352.00	12.40	496.00	2,149.33	25,792.00
7.00	280.00	1,213.33	14,560.00	12.50	500.00	2,166.67	26,000.00
7.10	284.00	1,230.67	14,768.00	12.60	504.00	2,184.00	26,208.00
7.20	288.00	1,248.00	14,976.00	12.70	508.00	2,201.33	26,416.00
7.30	292.00	1,265.33	15,184.00	12.80	512.00	2,218.67	26,624.00
7.40	296.00	1,282.67	15,392.00	12.90	516.00	2,236.00	26,832.00
7.50	300.00	1,300.00	15,600.00	13.00	520.00	2,253.33	27,040.00
7.60	304.00	1,317.33	15,808.00	13.10	524.00	2,270.67	27,248.00
7.70	308.00	1,334.67	16,016.00	13.20	528.00	2,288.00	27,456.00
7.80	312.00	1,352.00	16,224.00	13.30	532.00	2,305.33	27,664.00
7.90	316.00	1,369.33	16,432.00	13.40	536.00	2,322.67	27,872.00
8.00	320.00	1,386.67	16,640.00	13.50	540.00	2,340.00	28,080.00
8.10	324.00	1,404.00	16,848.00	13.60	544.00	2,357.33	28,288.00
8.20	328.00	1,421.33	17,056.00	13.70	548.00	2,374.67	28,496.00
8.30	332.00	1,438.67	17,264.00	13.80	552.00	2,392.00	28,704.00
8.40	336.00	1,456.00	17,472.00	13.90	556.00	2,409.33	28,912.00
8.50	340.00	1,473.33	17,680.00	14.00	560.00	2,426.67	29,120.00
8.60	344.00	1,490.67	17,888.00	14.10	564.00	2,444.00	29,328.00
8.70	348.00	1,508.00	18,096.00	14.20	568.00	2,461.33	29,536.00
8.80	352.00	1,525.33	18,304.00	14.30	572.00	2,478.67	29,744.00
8.90	356.00	1,542.67	18,512.00	14.40	576.00	2,496.00	29,952.00
9.00	360.00	1,560.00	18,720.00	14.50	580.00	2,513.33	30,160.00
9.10	364.00	1,577.33	18,928.00	14.60	584.00	2,530.67	30,368.00
9.20	368.00	1,594.67	19,136.00	14.70	588.00	2,548.00	30,576.00
9.30	372.00	1,612.00	19,344.00	14.80	592.00	2,565.33	30,784.00
9.40	376.00	1,629.33	19,552.00	14.90	596.00	2,582.67	30,992.00
9.50	380.00	1,646.67	19,760.00	15.00	600.00	2,600.00	31,200.00
9.60	384.00	1,664.00	19,968.00	15.10	604.00	2,617.33	31,408.00
9.70	388.00	1,681.33	20,176.00	15.20	608.00	2,634.67	31,616.00
9.80	392.00	1,698.67	20,384.00	15.30	612.00	2,652.00	31,824.00
9.90	396.00	1,716.00	20,592.00	15.40	616.00	2,669.33	32,032.00
10.00	400.00	1,733.33	20,800.00	15.50	620.00	2,686.67	32,240.00
10.10	404.00	1,750.67	21,008.00	15.60	624.00	2,704.00	32,448.00
10.20	408.00	1,768.00	21,216.00	15.70	628.00	2,721.33	32,656.00
10.30	412.00	1,785.33	21,424.00	15.80	632.00	2,738.67	32,864.00
10.40	416.00	1,802.67	21,632.00	15.90	636.00	2,756.00	33,072.00



# Wage Conversion Table

Hourly	Weekly	Monthly	Annually	Hourly	Weekly	Monthly	Annually
\$16.00	\$640.00	\$2,773.33	\$33,280.00	\$21.50	\$860.00	\$3,726.67	\$44,720.00
16.10	644.00	2,790.67	33,488.00	21.60	864.00	3,744.00	44,928.00
16.20	648.00	2,808.00	33,696.00	21.70	868.00	3,761.33	45,136.00
16.30	652.00	2,825.33	33,904.00	21.80	872.00	3,778.67	45,344.00
16.40	656.00	2,842.67	34,112.00	21.90	876.00	3,796.00	45,552.00
16.50	660.00	2,860.00	34,320.00	22.00	880.00	3,813.33	45,760.00
16.60	664.00	2,877.33	34,528.00	22.10	884.00	3,830.67	45,968.00
16.70	668.00	2,894.67	34,736.00	22.20	888.00	3,848.00	46,176.00
16.80	672.00	2,912.00	34,944.00	22.30	892.00	3,865.33	46,384.00
16.90	676.00	2,929.33	35,152.00	22.40	896.00	3,882.67	46,592.00
17.00	680.00	2,946.67	35,360.00	22.50	900.00	3,900.00	46,800.00
17.10	684.00	2,964.00	35,568.00	22.60	904.00	3,917.33	47,008.00
17.20	688.00	2,981.33	35,776.00	22.70	908.00	3,934.67	47,216.00
17.30	692.00	2,998.67	35,984.00	22.80	912.00	3,952.00	47,424.00
17.40	696.00	3,016.00	36,192.00	22.90	916.00	3,969.33	47,632.00
17.50	700.00	3,033.33	36,400.00	23.00	920.00	3,986.67	47,840.00
17.60	704.00	3,050.67	36,608.00	23.10	924.00	4,004.00	48,048.00
17.70	708.00	3,068.00	36,816.00	23.20	928.00	4,021.33	48,256.00
17.80	712.00	3,085.33	37,024.00	23.30	932.00	4,038.67	48,464.00
17.90	716.00	3,102.67	37,232.00	23.40	936.00	4,056.00	48,672.00
18.00	720.00	3,120.00	37,440.00	23.50	940.00	4,073.33	48,880.00
18.10	724.00	3,137.33	37,648.00	23.60	944.00	4,090.67	49,088.00
18.20	728.00	3,154.67	37,856.00	23.70	948.00	4,108.00	49,296.00
18.30	732.00	3,172.00	38,064.00	23.80	952.00	4,125.33	49,504.00
18.40	736.00	3,189.33	38,272.00	23.90	956.00	4,142.67	49,712.00
18.50	740.00	3,206.67	38,480.00	24.00	960.00	4,160.00	49,920.00
18.60	744.00	3,224.00	38,688.00	24.10	964.00	4,177.33	50,128.00
18.70	748.00	3,241.33	38,896.00	24.20	968.00	4,194.67	50,336.00
18.80	752.00	3,258.67	39,104.00	24.30	972.00	4,212.00	50,544.00
18.90	756.00	3,276.00	39,312.00	24.40	976.00	4,229.33	50,752.00
19.00	760.00	3,293.33	39,520.00	24.50	980.00	4,246.67	50,960.00
19.10	764.00	3,310.67	39,728.00	24.60	984.00	4,264.00	51,168.00
19.20	768.00	3,328.00	39,936.00	24.70	988.00	4,281.33	51,376.00
19.30	772.00	3,345.33	40,144.00	24.80	992.00	4,298.67	51,584.00
19.40	776.00	3,362.67	40,352.00	24.90	996.00	4,316.00	51,792.00
19.50	780.00	3,380.00	40,560.00	25.00	1,000.00	4,333.33	52,000.00
19.60	784.00	3,397.33	40,768.00	25.10	1,004.00	4,350.67	52,208.00
19.70	788.00	3,414.67	40,976.00	25.20	1,008.00	4,368.00	52,416.00
19.80	792.00	3,432.00	41,184.00	25.30	1,012.00	4,385.33	52,624.00
19.90	796.00	3,449.33	41,392.00	25.40	1,016.00	4,402.67	52,832.00
20.00	800.00	3,466.67	41,600.00	25.50	1,020.00	4,420.00	53,040.00
20.10	804.00	3,484.00	41,808.00	25.60	1,024.00	4,437.33	53,248.00
20.20	808.00	3,501.33	42,016.00	25.70	1,028.00	4,454.67	53,456.00
20.30	812.00	3,518.67	42,224.00	25.80	1,032.00	4,472.00	53,664.00
20.40	816.00	3,536.00	42,432.00	25.90	1,036.00	4,489.33	53,872.00
20.50	820.00	3,553.33	42,640.00	26.00	1,040.00	4,506.67	54,080.00
20.60	824.00	3,570.67	42,848.00	26.10	1,044.00	4,524.00	54,288.00
20.70	828.00	3,588.00	43,056.00	26.20	1,048.00	4,541.33	54,496.00
20.80	832.00	3,605.33	43,264.00	26.30	1,052.00	4,558.67	54,704.00
20.90	836.00	3,622.67	43,472.00	26.40	1,056.00	4,576.00	54,912.00
21.00	840.00	3,640.00	43,680.00	26.50	1,060.00	4,593.33	55,120.00
21.10	844.00	3,657.33	43,888.00	26.60	1,064.00	4,610.67	55,328.00
21.20	848.00	3,674.67	44,096.00	26.70	1,068.00	4,628.00	55,536.00
21.30	852.00	3,692.00	44,304.00	26.80	1,072.00	4,645.33	55,744.00
21.40	856.00	3,709.33	44,512.00	26.90	1,076.00	4,662.67	55,952.00

# Survey Method and Reliability Statement for the 2000 OES Survey All-Industry Wage Rate Estimates

## General

The Occupational Employment Statistics (OES) survey is an annual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments, by industry. The survey samples approximately 400,000 establishments nationally per year, taking three years to fully collect the sample of 1.2 million establishments. The Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) provide funding for the survey. BLS provides the procedures and technical support, while the State Employment Security Agencies (SESAs) collect the data. The SESAs produce occupational estimates by detailed industries for local areas and the states. BLS produces similar industry-specific estimates for the nation as well as employment and wage estimates for 770 occupations across all industries for the nation, each of the 50 states plus the District of Columbia, and Metropolitan Statistical Areas (MSAs).

## Survey Definitions and Concepts

Key definitions are as follows:

An *establishment* is an economic unit, such as a factory, mine, or store which produces goods or services. It is generally at a single location and engaged predominantly in one economic activity.

The OES survey defines *employment* as the number of workers who can be classified as full-time or part-time employees; workers on paid vacations or other types of leave; workers on unpaid short-term absences; salaried officers, executives, and staff members of incorporated firms; employees temporarily assigned to other units; and employees for whom the reporting unit is their permanent duty station regardless of whether that unit prepares their paycheck. The survey excludes the self-employed, owners/partners of unincorporated firms, and unpaid family workers. Employees are reported in the occupation in which they are working, not necessarily for which they were trained.

*Employment* represents the estimate of total wage and salary employment in an occupation across the industries in which it was reported. The OES survey form sent to an establishment contains between 50 and 225 OES occupations. The number of occupations listed on a form depends on the industry classification and size class of the sampled establishments. To reduce paperwork and respondent burden, no survey form contains every OES occupation.

**The Occupational Classification Standard for 2000:** In 1999, the OES survey began using the Office of Management and Budget's (OMB) occupational classification system—the Standard Occupational Classification System (SOC). The SOC system is the first OMB-required occupational classification system for federal agencies. The OES survey categorizes workers in one of about 770 detailed occupations. Together, these detailed occupations comprise 22 major occupational groups. The major groups of the SOC system are as follows:

- Management occupations
- Business and financial operations occupations
- Computer and mathematical occupations
- Architecture and engineering occupations
- Life, physical and social science occupations
- Community and social services occupations
- Legal occupations
- Education, training and library occupations
- Arts, design, entertainment, sports and media occupations
- Health care practitioners and technical occupations
- Health care support occupations
- Protective service occupations
- Food preparation and serving related occupations
- Building and grounds cleaning and maintenance occupations
- Personal care and service occupations
- Sales and related occupations
- Office and administrative support occupations
- Farming, fishing and forestry occupations
- Construction and extraction occupations
- Installation, maintenance and repair occupations
- Production occupations
- Transportation and material moving occupations

For more information about the SOC, please see the BLS website at <http://www.bls.gov/soc>.

*Wages* for the OES survey are straight-time, gross pay, exclusive of premium pay. Included are base rate, cost-of-living allowances, guaranteed pay, hazardous-duty pay, incentive pay, including commissions and production bonuses, tips and on-call pay. Excluded are back pay, jury duty pay, overtime pay, severance pay, shift differentials, nonproduction bonuses, and tuition reimbursements.

The OES survey collects wage data in 12 intervals. Employers report the number of employees in an occupation per each wage range. The wage intervals used for the 2000 survey are as follows:

Interval	Hourly Wages	Annual Wages
Range A	Under \$6.75	Under \$14,040
Range B	\$6.75 to \$8.49	\$14,040 to \$17,679
Range C	\$8.50 to \$10.74	\$17,680 to \$22,359
Range D	\$10.75 to \$13.49	\$22,360 to \$28,079
Range E	\$13.50 to \$16.99	\$28,080 to \$35,359
Range F	\$17.00 to \$21.49	\$35,360 to \$44,719
Range G	\$21.50 to \$27.24	\$44,720 to \$56,679
Range H	\$27.25 to \$34.49	\$56,680 to \$71,759
Range I	\$34.50 to \$43.74	\$71,760 to \$90,999
Range J	\$43.75 to \$55.49	\$91,000 to \$115,439
Range K	\$55.50 to \$69.99	\$115,440 to \$145,599
Range L	\$70.00 and over	\$145,600 and over

*Hourly versus annual wage reporting:* For each occupation, respondents are asked to report the number of employees paid within specific wage intervals. The intervals are defined both as hourly rates and the corresponding annual rates, where the annual rates are constructed by multiplying the hourly wage rate for the interval by the typical work year of 2,080 hours. In reporting, the respondent can reference either the hourly or the annual rate, but is instructed to report the hourly rate for part-time workers.

*Annual wage:* Most of the annual mean wage estimates in this release are calculated by multiplying the mean wage by a “year-round, full-time” hours figure of 2,080 hours per year (52 weeks by 40 hours). Most employees are paid at an hourly rate by their employers and may work less than or more than 40 hours per week. Thus, the annual wage estimates may not represent the actual annual pay received by the employee.

There are a small number of occupations where only an annual wage figure is provided. The workers in these occupations generally work less than the usual 2,080 hours per year. Since the survey does not collect the actual hours worked, the hourly rate cannot be calculated from the annual wages. For these occupations, therefore, only the annual salary is reported, which has been calculated directly from the data (rather than by multiplying an hourly figure by 2,080 hours). Occupations that typically have a work year of less than 2,080 hours include musical and entertainment occupations, pilots and flight attendants, and teachers.

The *Unemployment Insurance (UI) Address File* is a micro-level employer file prepared quarterly by each State’s Employment Security Agency and submitted to the Bureau of Labor Statistics. For 2000, the file from June 1999 is used as a sampling frame while the

fourth quarter of 2000 is used as a current source of population values for employment and units.

*Industry classifications* are based on the 1987 *Standard Industrial Classification Manual*, Office of Management and Budget (OMB). Industry is classified on the basis of the major product or activity of the establishment, as determined by total sales or receipts of the calendar year prior to classification.

## Scope of Survey

The OES survey currently uses the Standard Industrial Classification (SIC) system to classify all establishments. An establishment is defined as an economic unit that processes goods or provides services, such as factory, mine or store. The establishment is generally at a single physical location and is engaged primarily in one type of economic activity. The scope of the survey includes establishments in SIC codes 07, 10, 12-17, 20-42, 44-65, 67, 70, 72, 73, 75, 76, 78-84, 86, 87, and 89. This scope covers agricultural services, mining, construction, manufacturing, transportation and public utilities, wholesale and retail trade, finance, insurance and real estate, and services. Data for the postal service (SIC code 43) and federal government are universe counts obtained from the Office of Personnel Management.

## Sampling Procedures

States' Unemployment Insurance (UI) files provide the universe from which the OES survey draws its sample. The employment benchmarks are obtained from reports submitted by employers to the UI program. In some nonmanufacturing industries, supplemental sources are used for establishments not reporting to the UI program. The OES survey sample is stratified by area, industry and size class. Size classes are defined as follows:

Size class	Number of employees
1	1 to 4
2	5 to 9
3	10 to 19
4	20 to 49
5	50 to 99
6	100 to 249
7	250 and above

UI reporting units with 250 or more employees are sampled with certainty across a three-year period. Many states sample one-third of their certainty units each year. However, there are some states that sample more than one-third of their certainty units during one survey year. In 1997, establishments in size classes 2 to 6 were selected based on a probability sample. The sampling weights in size class 2 were adjusted to account for the employment in size class 1. In 1998, the OES Survey began sampling establishments in

size class 1; thus, establishments in all size classes are now represented in the probability sample.

## Method of Calculation

Survey schedules were initially mailed to all sampled establishments.

Two additional mailings were sent to nonresponding establishments. Telephone follow-ups were made to nonrespondents considered crucial to the survey because of their size.

## Response

Subsequent to the closeout date for national estimates, additional data were collected by the states and used to prepare their own estimates. Consequently, the response rates in most states are higher than the response rate used to develop estimates of all-industry wage rates for each MSA.

## Estimation Methodology

The OES survey samples approximately 400,000 establishments each year and, over a three-year period, contacts approximately 1.2 million establishments. Each single-year sample represents a one-third sample of both the certainty and non-certainty strata for the full three-year sample plan. While estimates can be made from a single year or two years of data, as was done for the 2000 data released here, the OES survey has been designed to produce estimates using the full three years of data. The full three-year sample allows the production of estimates at fine levels of geography, industry, and occupational detail, while estimates using any one year of data would be subject to a higher sampling error (due to the smaller sample size) and the limitations associated with having only one-third of the units from the certainty strata. Producing estimates using the three years of sample data provides significant sampling error reductions (particularly for small geographic areas and occupations); however, it also has some quality limitations in that it requires the adjustment of earlier years' data to the current reference period—a procedure referred to as “wage updating.”

**Wage Updating:** As noted above, combining multiple years of data has both statistical advantages and limitations. Significant reductions in sampling error can be achieved by taking advantage of three years of data, which covers over 70 percent of the employment in the United States. This feature is particularly important in improving the reliability of estimates for small domains in the population (that is, wage and employment estimates for detailed occupations in small areas). Combining multiple years of data also has been necessary to obtain full coverage of the certainty strata (that is, large employers with 250+ employment).

Starting with the 1997 estimates, the OES program has used the over-the-year fourth-quarter wage changes from the Bureau's Employment Cost Index to adjust prior year survey data before combining it with the current year data. The wage updating procedure

assumes that each occupation's wage, as measured in the earlier years, moves according to the average movement of its occupational division and that there are no major geographic or detailed occupational differences—and this may not be the case. The Bureau has conducted research over the past several years on the accuracy of the Employment Cost Index wage updating method versus other modeling approaches. Current research results support the continued use of the Employment Cost Index wage updating methodology.

**The 2000 OES survey estimates:** Beginning in 1999, the OES survey began using an occupational coding structure based on OMB's Standard Occupational Classification System (SOC). Because of the SOC conversion, the estimates from the 2000 OES survey are based only on two years of data collected in the 1999 and 2000 surveys. The reference period for each year's survey is the fourth quarter of that year. The nationwide response rate for the 2000 survey was 78 percent in units and 70 percent in employment.

The 2000 estimates use the wage updating methodology introduced in 1997, which uses the over-the-year fourth-quarter wage changes from the Bureau's Employment Cost Index to adjust prior years' data before combining them with data from the current year. In addition, the 2000 estimates use the estimation methodology introduced in 1997, which uses a "nearest neighbor" imputation approach for nonrespondents and applies employment benchmarks at a detailed MSA by three-digit industry and broad size class level.

**Future research:** The expanded OES survey is a relatively new program, and BLS has a number of research efforts under way. Some areas of future research are given below.

Collection methodology research—This includes research on electronic collection of data from employers as an alternative to the mail questionnaire.

Estimation methodology research—An important research effort over the next several years will be the evaluation of the mean wage methodology for the upper open-ended interval. The identification of alternative modeling approaches may produce improved overall accuracy.

A *mean wage* and a *median wage* are calculated using wage data from establishments in the industries that reported employment for an occupation.

*Mean wage* is the estimated total wages for an occupation divided by its weighted survey employment. For the upper open-ended wage interval, a Winsorized mean procedure is used to estimate the mean wage. That is, the mean wage value for the upper open-ended wage interval is set at its lower bound (\$70). For the other intervals, a mean wage value was calculated based on occupational wage data collected by the Office of Compensation and Working Conditions. These interval mean wage values are then attributed to all workers reported in the interval. For each occupation, total weighted wages in each interval (i.e., mean wages times weighted employment) are summed across all intervals and divided by the occupation's weighted survey employment to obtain a mean wage.

*Median wage* is the estimated 50<sup>th</sup> percentile of the distribution of wages; 50 percent of workers in an occupation earn wages below, and 50 percent earn wages above the median wage. The wage interval containing the mean wage is located using a cumulative frequency count of employment across wage intervals. After the targeted wage interval is identified, the median wage rate is then estimated by a linear interpolation procedure.

## Reliability of the Estimates

The occupational wage rates in this report are estimates derived from a sample survey. Two types of errors are possible in an estimate based on a sample survey – sampling error and nonsampling error. Sampling error occurs because the observations are based on a sample, not on the entire population. Nonsampling error is due to response, nonresponse, and operational errors.

*Nonsampling errors*—Estimates are subject to various response, nonresponse, and operational errors during the survey process. Sources of possible errors are data collection, response, coding, transcription, data editing, nonresponse adjustment, and estimation. These errors would also occur if a complete census were conducted under the same conditions as the sample survey. Explicit measures of their effects are not available. However, it is believed that the important response and operational errors were detected and corrected during the review and validation process.

The employment total and wage data for the occupation reflects only those industries that reported the occupation. This occurs primarily in those industries where the occupation appeared on the survey form. Since every occupation does not appear on every industry-specific form, there may be a bias in the employment and wage data for some occupations. The extent of this bias is unknown.

Another source of potential bias is the limitations placed on the size of the benchmark factors. A benchmark factor is the ratio of a known employment value to a sample-derived employment estimate. This factor is used to make a post-stratification adjustment that makes the total weighted employment estimate at the state/three-digit SIC industry/Metropolitan Statistical Area (MSA)/employment size class level match the population employment at that level.

The source of the population employment data is the state's Quarterly Unemployment Insurance files for the reference period of the survey. In cases where a small sample was taken, the ratio factor can become large or small. In order to prevent an establishment from contributing either too much or not enough to an MSA's wage rate estimates, the benchmark factor was not allowed to exceed a predetermined value. The total employment count for those MSAs where the benchmark factor was limited by this ceiling will be biased to a small degree in those strata. The employment not assigned to those strata because of this ceiling was then distributed across the other MSAs in the state/three-digit industry, so that the estimated employment of the state/three-digit industry would match the known employment totals at that level.



*Sampling errors* – The particular sample used in this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. For example, occupational wage rate estimates derived from the different samples will differ from one another. The deviation of a sample estimate from the average of all possible sample estimates is called the sampling error. The standard error of an estimate is a measure of the variation of estimates across all possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples.

## **Quality Control Measures**

Quality control measures implemented in the OES survey include:

- review of the specific occupations to be collected for each industry, and those to be collected in residual categories
- creating and validating the sample frame for all states at BLS-Washington
- allocating and selecting the sample for all states at BLS-Washington
- follow-up solicitations of nonrespondents (especially critical nonrespondents)
- review of survey schedules to verify the accuracy and reasonableness of the reported data
- adjustments of atypical reporting units on the data file
- validation of the nonresponse adjustment factors
- validation of the population employment and ratio factors
- standardized data processing programs and activities

## Other Sources of Montana Labor Market Information

### In Publications:

The following publications are available, at no charge, from the Montana Department of Labor and Industry's Research and Analysis Bureau:

**Census of Fatal Occupational Injuries**—Includes information on work-related fatalities in Montana and the U.S.

**County labor market information fliers**—Provide information on largest private employers, employment by industry, employment and unemployment statistics, population, per capita income, local information resources, etc. for Montana counties with larger populations.

**Job Projections for Montana's Industries and Occupations**—Presents information developed to help people anticipate which industries and occupations are likely to show job growth in the near future and which are not.

**Montana Economy at a Glance**—One-page bulletin provides a snapshot of Montana's economy. Includes national, state and county unemployment rates; weekly earnings compared to U.S. inflation; and economic highlights of interest.

**Montana Employment and Labor Force Trends**—Presents information on statewide and county labor market information. Information is also included on employment by industry, female employment by industry, and average hours and earnings.

**Montana labor market information flier**—Statewide labor market information on largest private employers, employment by industry, employment and unemployment statistics, population, per capita income, etc.

**Montana Occupational Injuries and Illnesses**—Includes information on work-related injuries and illnesses, including accident rates and frequencies by industry.

**Profile of the Montana Worker**—A publication of charts and graphs providing a comprehensive profile of Montana and its labor force.

**Wage information publications**—Include informational wage rates by occupation for Montana, the U.S., and for Montana's single-county Metropolitan Statistical Areas.

### On the Internet:

The Department of Labor and Industry's Research and Analysis Bureau places a wide variety of labor market information on the Internet at <http://rad.dli.state.mt.us/>. Listings of job openings and State of Montana job vacancies can be found at the State Job Service Workforce Centers' self-directed job search system address on the Internet at <http://jsd.dli.state.mt.us/>. In addition, Montana job openings are published on America's Job Bank on the Internet World Wide Web Network.

*We will do our best to provide information in accessible format, on request, in compliance with the Americans with Disabilities Act.*